

THE NAVY LEAGUE ANNUAL

(CORRECTED TO JANUARY 31ST, 1916)

EDITED BY

ROBERT YERBURGH

ASSISTED BY

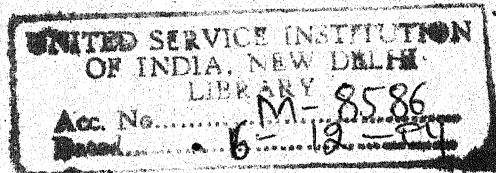
ARCHIBALD HURD

AND

GERARD FIENNES

"THE FLEET of England is her all in all."—TENNYSON.

EIGHTH YEAR OF ISSUE



LONDON

JOHN MURRAY, ALBEMARLE STREET, W.

1916


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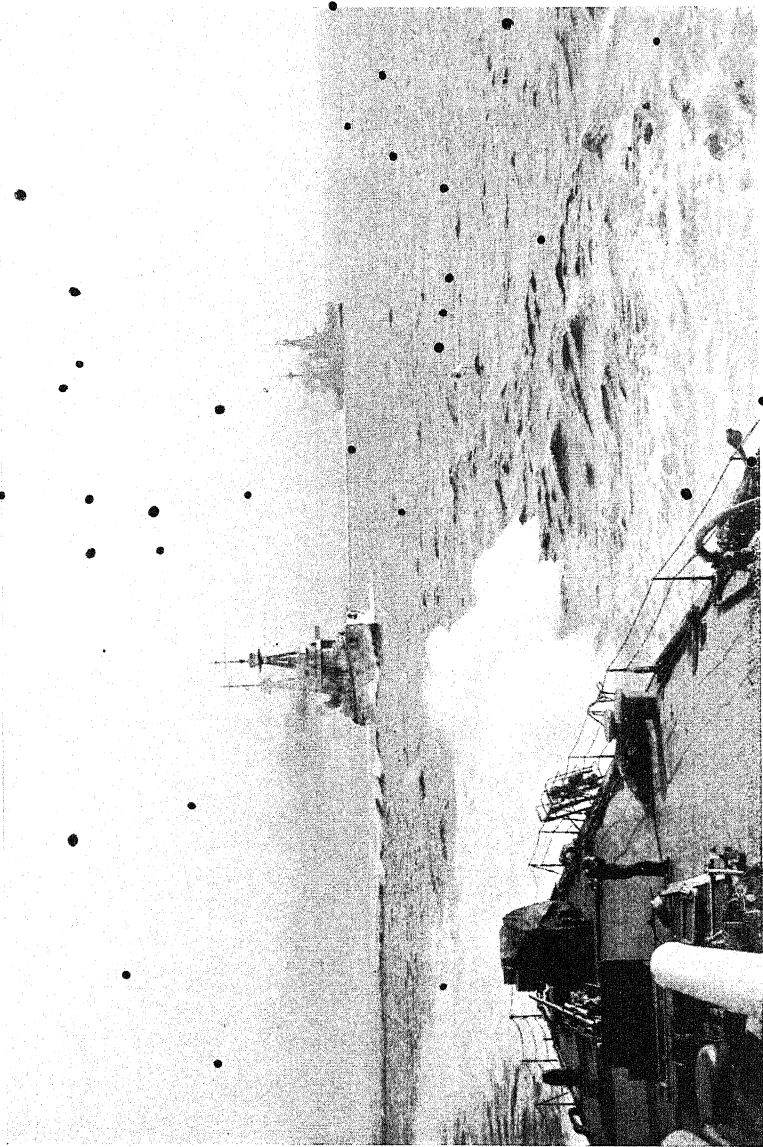
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BATTLE-CRUISERS AT SEA

Foreword.

IN response to an appeal which has been made from many parts of the world during the past twelve months it has been decided to bring out this Edition of THE NAVY LEAGUE ANNUAL for the year 1915-16. From the Oversea Dominions of the Empire, from the Allied nations who are fighting gallantly by our side in this titanic struggle, and from every neutral community requests have reached the central offices of the Navy League urging that in some form or other the publication of the ANNUAL should be continued. This demand for another issue even in the midst of this great war has received the approval of our distinguished publisher, Mr. John Murray, who has done so much to extend the influence and enhance the practical value of the ANNUAL since its original appearance as a yearly review of naval policy and progress.

I am much honoured in being invited by the Executive Committee of the Navy League to become the Editor of the present volume, but I should have hesitated to undertake so grave a responsibility if it were not for the generous co-operation and cordial support of the two gentlemen who are associated with me as colleagues in the preparation of the work, namely, Mr. Archibald Hurd and Mr. Gerard Fiennes. Of the qualifications of these gentlemen to deal with all and every problem relating to sea power, it is unnecessary for me to say anything. The great services of both writers in the cause of British maritime supremacy are widely known and profoundly appreciated.

My colleagues and myself, in presenting this English issue of the ANNUAL to the public, desire to express our deep gratitude to our brilliant friend and my own most loyal and enthusiastic co-worker for many years on the Committee of the Navy League—Captain Alan H. Burgoyne, M.P. He it was who originally conceived and founded the ANNUAL, and it has been due entirely to his personal

energy, unflagging zeal, and extensive knowledge of naval affairs both practical and scientific, that this work has achieved such wide popularity and has so universally commended itself as a textbook of naval information. This edition, in the main, follows upon the lines laid down by Captain Burgoyne, and it may be said here that nothing would have given more pleasure to all his old friends and admirers than if he were able once more to undertake its production. Captain Burgoyne entered upon active service immediately upon the outbreak of the war, and his eminent attainments as a naval authority are not, therefore, available for the editorial functions which for the past seven years he has discharged with so much success.

In the contemplation of the publication of the present volume the first step naturally was to consult the Admiralty. The proposition was considered by that Department with characteristic promptitude and courtesy, and the preparation of the work was approved subject to the condition that the contents should be submitted to the Naval Censor, and that the reproduction of certain photographs and drawings would not, for obvious reasons, be permitted.

The ANNUAL now appears at a time momentous in our history. The claim which has been advanced for generations by the advocates of sea power, as to its being the dominant factor in the determination of the destiny of nations and the fate of civilisation, has been abundantly justified. The mastery of the sea by the British Empire and its Allies is demonstrated to have been the sure shield between unconscionable tyranny and the liberties of mankind. It is impossible even at this stage of the conflict to realise the magnitude of the achievement which stands to the credit of the Fleet after eighteen months of this world-wide war. The patience, endurance, splendid courage, and exalted spirit of sacrifice of officers and men in every branch of the service will arouse for all time the admiration of the world. Consummate skill and fearless devotion in the discharge of the most perilous duties have distinguished the British Navy through the long record of our Island story; but never before have these great qualities been more abounding in the men who man our fighting ships than they are to-day.

The influence which the British Navy has exercised from the very beginning of hostilities up to the present moment

has been tersely defined by Lord Sydenham in the article which he contributed to the August issue of *The Navy*, on "The Fleet after Twelve Months of the War." In the course of a brilliant summary of the situation he declares: "If we attempt to survey the course of the war as a whole, it will be found to turn upon the sea power based upon the British Fleet." This puts briefly and forcefully the most striking fact which emerges from the whole story of the present struggle.

It may, perhaps, be appropriate here to summarise the achievements which have directly resulted from the silent pressure of the dominant sea power of this country during the past fourteen months:

1. The sea power of the enemy, upon which the constructive thought of the German people and the resources of the German Empire have been lavishly expended for a generation, has been throttled and demoralised.

2. The merchant shipping of the enemy has been swept, within a few months after the declaration of war, from the waters of the world.

3. British troops for the support of the Allies have been transported from the remotest corners of the world to the various theatres of war with systematic regularity, without the loss of a single man.

4. The trade routes along which the commerce of the world travels to the ports of the Allies have been kept open, and our gigantic shipping industry, with comparatively little loss, has been carried on with undeviating precision.

5. The shores of France, Great Britain's friend and Ally, have been rendered immune from attack by the enemy's Fleet.

6. Turkish power in the Near East has been grappled with in the Dardanelles with all the vigour which the combined military and naval organisation of the Allies can employ.

7. The operations against the Turks in the Persian Gulf have been systematically prosecuted with continued success.

8. The war in South Africa has been concluded by a magnificent feat of arms directed by the great Prime Minister-soldier of the Union, who, in eloquent terms, has attributed his success to the silent influence of the British Fleet.

9. In East and West Africa military operations have been

carried on energetically with the steady crushing of the enemy's forces, assisted by continuous support from the sea.

10. The supply of munitions from every friendly community in the world oversea has been maintained.

11. German submarine aggression has had comparatively but little result.

12. Above all, the shores of these Islands have been kept free from violation by enemy hordes, and the people are able to pursue their ordinary avocations in freedom and safety within the encircling seas.

This is a record of which our race throughout the world may well be proud; it is a record for which all who love liberty must be profoundly grateful.

The great truth incidental to the war is that its effects are being felt in every corner of the globe. The famous saying of Macaulay, in his criticism of the policy of Frederick the Great, applies with tenfold emphasis to the conflagration which has been the determinate purpose and logical consequence of the policy of his successor. Macaulay's words are worth quoting: "The evils produced by his wickedness were felt in lands where the name of Prussia was unknown. In order that he might rob a neighbour whom he had promised to defend, black men fought on the coast of Coromandel and red men scalped each other by the great lakes of North America." The historian whose duty it will be to chronicle the terrible episodes of the time in which we live will in honesty be compelled to associate with the name of William II a much more sinister influence upon the relationship of civilised peoples than that which attached to the character of Frederick. The circumstances which have given rise to the war form no part of my present task in preparing a few appropriate observations as an introduction to this volume. I only feel myself called upon to note that the declaration of the German Emperor that the future of the German people was upon the sea indicated the adoption of a programme of world-expansion on the part of Germany, in the prosecution of which war was inevitable. The full aspect of Germany's pretensions is comprehensively discussed by Mr. Archibald Hurd in his illuminating article dealing with "The Triumph of Sea Power," and incidental references in the valuable contributions which have been received from naval experts

who deal with the attitude of the various Allied fleets towards the war will serve to emphasise and enlarge upon Mr. Hurd's point of view.

Admiral Mahan declared in his great work, published twenty-six years ago, that "the profound influence of sea commerce upon the wealth and strength of countries was clearly seen long before the true principles which governed its growth and prosperity were detected." This proposition has long been universally accepted, but probably impressed its full meaning most deeply upon the minds of modern German statesmen. Viewed in the light of recent European history it is now clear that since the enactment of the German Navy Law, which came into operation in 1900, those responsible for German national policy had determined that the principles which governed the growth and prosperity of commerce should be applied practically side by side, or, indeed, in advance of, commercial expansion itself. It must have been borne in upon everybody who took any interest in the progress of nations that a gigantic effort was being put forth, with the practically unanimous support of the whole people of the German Empire, to develop ultimately such a standard of sea power as would at Germany's selected moment enable her to challenge the sea supremacy of Great Britain. It is poor consolation in these times of national trial for any writer upon public affairs to reflect upon the mistakes of the past or to urge, in justification of the principles for which he contended, the helpless and hopeless formula "I told you so." Nothing is more remote from my intention; but I venture to suggest that the naval history of the past fifteen years presents to us all a lesson of stirring significance, and I may express the hope that those sections of our body politic whose attitude towards the maintenance of our sea supremacy was always critical, and frequently destructive, may be led to perceive in the future that the foundations of our Island freedom and imperial stability were founded upon, and must always be sustained by, our unassailable strength upon the sea.

The members of the Navy League throughout the world, with whom I have had the honour to be associated for so many years in our joint effort to secure the maintenance of Sea Power as the first essential of our Imperial unity and strength, have now the gratification of feeling that in some degree they have contributed to the dominance of the Fleet.

To me, personally, no recollection of the continuous propaganda which has been carried on by the Navy League during twenty-one years brings more pleasure than the enthusiastic devotion of the Overseas Dominions to the cause of our sea supremacy. Indeed, it must be said at once that if the response in these Islands to the call of the Navy League had been in the same whole-hearted measure as that which manifested itself in the Dominions, our organisation would, in point of numbers and public influence, be greater than the corresponding organisation which was built up during the past few years in Germany under Imperial auspices, and with the support of every kind of official influence.

No words are adequate, I am convinced, to express what the world owes to the British Board of Admiralty. The mobilisation of the Fleet on July 18th, 1914, and the subsequent decision to maintain our ships in a condition of preparedness for war, will for ever redound to the credit of our naval administration. It was of infinite importance that this country should be in a position immediately to control enemy activity in home waters upon the outbreak of hostilities. This great task was accomplished with quiet but irresistible effect the moment our ultimatum expired, and from that point of time the inexorable pressure of our sea power exercised its determinant influence on the course of the war.

But, the war once embarked upon, the Admiralty were confronted with an infinity of problems without parallel in administrative experience. The equipment of a vast number of auxiliary ships, the organisation of an immensely enlarged personnel, the development of schemes of supply and transport hitherto undreamt of, the convoy of huge armies from the remote corners of the world to the theatres of war, the expansion of their intelligence system all round the globe, the patrol of coasts and harbours—all these functions, in addition to the direction of naval activity in all the seas and oceans, were at once thrust upon the Board of Admiralty. Duties apparently so overwhelming in variety, complexity, and magnitude might well have strained the resources of Admiralty organisation. The Board and their officers faced the situation with magnificent energy and promptitude, and the whole machinery was rapidly adjusted to the volume and weight of the burden which was thrust upon it. The management of the Admiralty is

the greatest business triumph of the war, and I feel that I am only giving expression to the universal sentiment of the nation in expressing the heartiest recognition of and the deepest gratitude for the incalculable services which the Admiralty Board and the officers employed in every branch of naval administration have rendered to the country.

Of the Grand Fleet itself I propose to say little. The story of its achievement is graven upon the hearts of the people of our whole Empire. The patient devotion of officers and men, in the wearisome process of watching and waiting through which our great ships have passed, has been a continuous theme of the writings of our greatest publicists and the speeches of the greatest leaders in our public life. I may, however, be permitted to quote the subjoined tribute from that distinguished ecclesiastic, the Archbishop of York, whose eloquent account of his visit to the Grand Fleet has stirred the imaginations of millions of his fellow-citizens :

To share the life of the Grand Fleet even for a short time enables one to realise the *sacrifices* which its officers and men have made and are making for their country. We are entering the second year of the war. Let it be remembered that not for three or six, but for twelve months, the Fleet has been enduring the strain of immediate readiness for battle. Almost all of its ships have been constantly at sea. They had no harbours secure from danger. They roamed ceaselessly over waste northern and western seas at full speed, often in wild weather, with the water covering the decks, in a region where the winter light lasts only a few hours, each ship moving hither and thither in the dark, her hundreds of men shut down below. It is almost impossible to realise the perpetual strain of such an experience. Officers and men have all the responsibilities of war without the thrill and excitement of battle. Day by day they have to be ready for action. Leave is almost impossible. Many of them have not had forty-eight hours' leave, few of them have had more, since the war began. No men have a greater love of their homes. They have often been within reach, sometimes even within sight, of them. Yet none can be spared. Week by week they are waiting for a chance which never comes. Some of them, to the envy of their comrades, have had their day—in the Dogger Bank, the Heligoland Bight, the Falkland Islands, the Dardanelles. But for most of them "the day" is still to come. It is impossible to describe the strain of waiting for it.

Yet in spite of all they are full of *cheerfulness*. Every captain had the same word—nothing could be better than the spirit of the whole crew. On deck you may see officers wrestling with the mighty "medicine-ball," and men playing cricket or quoits and every variety of ingenious game. Thanks to excellent food, fresh air, exercise, and the absence of shore temptations, the health of the Fleet is admirable. When I was with the largest section, the rate of sickness (including accidents) was just under 1 per cent. The men at work on board ship are a vision of smartness and alacrity. They are all splendidly "fit" in body and spirit.

Of the efficiency of the Fleet it is not for a mere outsider to speak; but even he cannot fail to be impressed by the all-pervading sense of *readiness*. It seemed as if there was one word written on every ship, on every part of her, on every man within her—the word Ready. There was no haste, no bustle, no confusion. Every ship in her place and every man at his post was ready.

But apart from the great ships of the Grand Fleet which await with anxious anticipation the longed-for opportunity of crushing the enemy, we must not forget the splendid zeal, unflagging enthusiasm, and unbounded self-sacrifice of the officers and men in the smaller and more actively-employed vessels in our many-sided sea service. It is impossible to contemplate without a thrill of emotion the indomitable spirit of endurance of the men who man our destroyers. In all kinds of weather these boats maintain their ceaseless vigil of patrol. The hardships which have had to be borne during the past winter and which must again be faced in the present winter can only be realised by those actually engaged in the work. And again think of our mine-sweepers, living, as it were, day in day out, cheek-by-jowl with death. The daily discharge of the duties which fall upon these ships is one constant act of heroism; and we who all owe so much to their loyalty and unselfish devotion to duty can never forget our indebtedness to them.

Any tribute to the achievements of the Grand Fleet, and to the triumphs which have marked the activities of the British Navy in all its spheres of action during the war, would be wholly incomplete without a reference being made to Admiral Sir John Jellicoe. When shortly after

the war began the announcement was made that Sir John Jellicoe was appointed to the supreme command of the Grand Fleet the keenest gratification was manifested by the members of the Navy League in every part of the Empire, and his selection by the Admiralty for this post of the highest responsibility was welcomed everywhere with the warmest expression of confidence and hope. How abundantly after fourteen months of conflict this attitude of mind towards our great naval leader has been justified is to be found in the striking tribute which the Archbishop of York pays to him in his Report of his visit to the Fleet:

"I cannot," he writes, "refrain from saying here that I left the Grand Fleet sharing to the full the admiration, affection, and confidence which every officer and man within it feels for its Commander-in-Chief, Sir John Jellicoe. Here assuredly is the right man in the right place at the right time. His officers give him the most absolute trust and loyalty. When I spoke of him to his men I always felt that quick response which to a speaker is the sure sign that he has reached and touched the hearts of his hearers. The Commander-in-Chief—quiet, modest, courteous, alert, resolute, holding in firm control every part of his great fighting engine—has under his command not only the ships but the heart of his Fleet. He embodies and strengthens that comradeship of single-minded service which is the crowning honour of the Navy."

On the naval situation as the ANNUAL goes to press there is little which need be added to the comprehensive summary which was issued to the Press by the First Lord of the Admiralty on July 31st last. In this illuminating review Mr. Balfour laid down the seven functions which a Fleet can perform in time of war. These functions are as follows:

1. It may drive the enemy's commerce off the sea.
2. It may protect its own commerce.
3. It may render the enemy's Fleet impotent.
4. It may make the transfer of enemy's troops across the sea impossible, whether for attack or defence.
5. It may transport its own troops where it will.
6. It may secure their supplies, and (in fitting circumstances)—
7. It may assist their operations.

Mr. Balfour then proceeded to prove categorically that

every one of these functions had been successfully performed by the British Fleet. How complete its discharge of them has been will be apparent from the summary of naval achievement which has been given in an earlier page of this preliminary chapter. It may be well, however, to draw attention to a statement of peculiar significance in Mr. Balfour's recital of our naval story since the beginning of the war. In referring to the German allegations that British ships of war had been lost in various engagements of which no information was given to the public of this country, Mr. Balfour says :

But for the benefit of those who think otherwise let me say that in no sea fight except that off the coast of Chile has any ship of the English Fleet been either sunk or seriously damaged.

As regards the future, we are all looking to it in the full assurance of ultimate victory, for we know that the strangling pressure of our sea power is making the position of the enemy every day more difficult. But though ultimate victory is certain, yet if the war, with its daily toll of the flower of our race, is to be shortened, it is essential that the nation should put into it every ounce of its energy and strength. And I have the best reasons to be satisfied that the gratitude of the people of these Islands to the Fleet for its incalculable services in preserving their liberties will be proved in the way most acceptable to the entire personnel of the Navy if they throw themselves heart and soul into the organisation of the whole of our effective man and woman power for the production of war material and for the increase of our military strength. This is the message of the Fleet to the people ashore, and this I venture to submit as my own appeal to the readers of the ANNUAL.

ROBERT YERBURGH.

Note.

IT is to be deeply regretted that owing to unforeseen difficulties in the collection of statistics relating to enemy and neutral navies the publication of the ANNUAL has had to be postponed to a date four months later than that upon which it was originally contemplated the work would be issued to the public. For this unavoidable delay the Editor tenders his apologies to the numerous subscribers, who have been naturally disappointed that their orders have so long remained unfulfilled. The Editor, however, ventures to hope that the details of the Fleets of the world which have been compiled with so much industry and accuracy will offer ample justification of his decision to withhold the issue of the volume until the Tables embodied in Part III were complete. The kindly patience of the Publisher during the prolonged interval between his first announcement of publication and the actual date at which the ANNUAL is offered to the public is very gratefully acknowledged.

There is little to be added to the text of the various articles relating to the work of the Allied Fleets since they were written. The influence of the command of the sea by Great Britain and her Allies upon the progress of the war becomes more manifest day by day. It is a matter of deep regret that the British Fleet was not permitted to apply with unrelenting rigour its full pressure in the prevention of cargoes ostensibly destined for neutral countries reaching the enemy. That immense quantities of food and necessary materials have reached Germany through neutral ports cannot be denied; and it is, of course, the fact that the facilities which the enemy in this way enjoyed have tended to prolong the war. The debate in the House of Commons on January 26th must have brought home to the Government the intense feeling of the country upon the vital necessity of rigid exclusion from the enemy of all

supplies by indirect channels, and it will be the duty of Parliament to secure that the terms of the Order in Council of March 11th, 1915, will be stringently applied to enemy trade.

The brilliant achievements of British and Russian submarines in the Baltic is one of the most interesting of the recent developments of the war. German hopes for the control of the waters of the Baltic have been completely shattered. German cruisers and other vessels have been torpedoed and sunk and some of the large German units have been seriously injured. The German attempt to force the Gulf of Riga was a complete failure. The trade between Scandinavia and Russian Baltic ports has been disorganised.

While German submarine activity in Home waters has practically ceased, some damage has been inflicted upon Allied trade in the Mediterranean by German and Austrian underwater craft. This menace is, however, well in hand, and the Allied Fleets continue to assert sea control from Gibraltar to the coasts of Asia Minor. The proof of this is seen in the helpless condition of the Austrian Fleet, and the successful despatch by Italy of a military expedition to Albania. British and French submarines have performed wonderful exploits in the Sea of Marmora and have sunk well over 200 enemy vessels. In the Black Sea the Russian Fleet continues to give an excellent account of itself.

The magnificent co-operation of the Fleets of the Allies with all the military operations in the Near East is beyond all praise. The recent despatch from Sir Charles Monro emphasises in eloquent terms the important part played by the British naval commanders and British seamen in the historic withdrawal from Suvla Bay and Anzac.

The menace of the Zeppelin is of serious moment, although the murderous raids which have recently taken place were of no military consequence. It is understood that the Admiralty and War Office are concerting active measures to deal with future attacks.

The Editor desires to express his warm appreciation of the most valuable help which he has received from Mr. Maurice Prendergast in the preparation of the Tables which are comprised in Part III of this work. With the exception of the German Tables, which have been compiled with so much care by Mr. Hector C. Bywater, the whole of

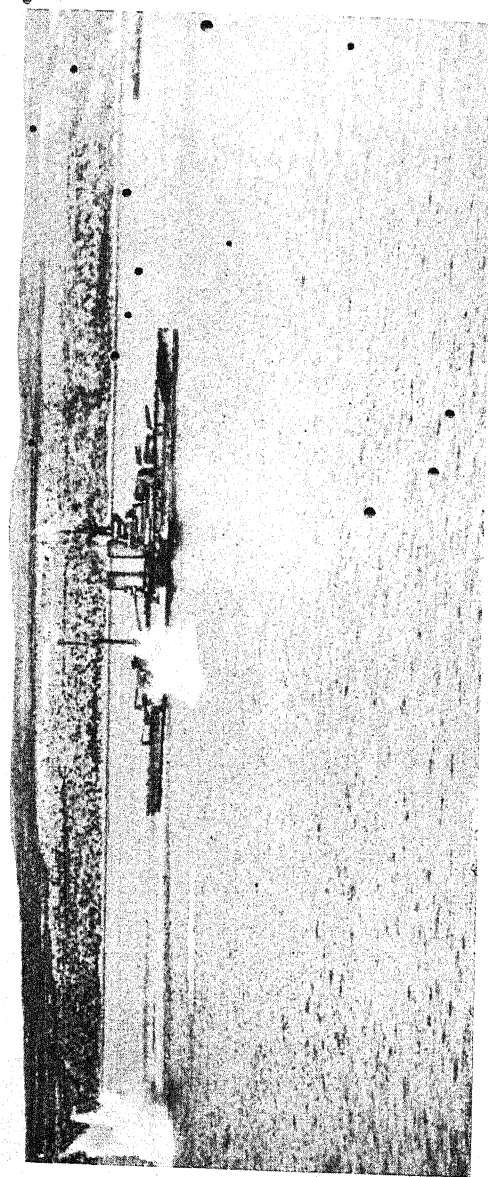
the statistical matter has been collected, edited, and arranged by Mr. Prendergast. To both these gentlemen and to others whose names cannot be quoted the Editor expresses his very sincere gratitude.

The Editor of THE NAVY LEAGUE ANNUAL is unfortunately unable to secure for this issue the excellent illustrations by Dr. Oscar Parkes which have formed so noteworthy a feature in past editions of this book. Dr. Oscar Parkes has been on Active Service with H.M. Navy for many months past, and is accordingly unable to delineate the latest types of warships for us. The photographs illustrating this Edition have been collected with a view to displaying the most interesting incidents and aspects of the naval war. Particular attention has been paid to German submarines, but it is regretted that no views can be given of the British monitors which have played so large a part in the naval operations. We are indebted to the holders of the copyright in the photos for their kind permission to reproduce them and must also express our obligations to the proprietors of *The Sphere* for their kind assistance in collecting the photos.

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H.M.S. "QUEEN ELIZABETH" UNDER FIRE

[Photo, Central News

PART I.

CHAPTER I.

The Triumph of Sea Power.

IT is one of the frailties of human nature that we frequently fail to appreciate a blessing until we have lost it. The blind know best the value of sight; the deaf of hearing; the invalid of health; the slave of freedom; and the exile of home. This characteristic is most marked in cases where some particular blessing is secured without much apparent effort on the part of those who enjoy it.

Do the British people realise the completeness of the triumph achieved by British sea-power since the opening of the present war—a triumph all the more conspicuous because there has been no naval battle on a grand scale? How many of us comprehend the character and effects of the miracle which was worked under our very eyes in August 1914, when the British Fleet was mobilised for war and took up its strategical stations, thus securing to us at sea the initiative which Germany gained on land? As Drake once remarked, "Advantage of time and place in all martial actions is half the victory, which, being lost, is irrecoverable." We gained that advantage, not by good fortune, but by good management. The mobilisation of the British Fleet was the final act in the long and dramatic contest—what Lord Rosebery once described as the *bellum tacens*—between this country and Germany, in which members of the Navy League throughout the Empire were privileged to take some part.

Only one thing was lacking to Germany in August 1914 to ensure the complete success of her elaborate plans and careful preparations for the domination of Europe, and that was the control of the sea, which would have enabled her to establish a maritime siege of France and

Russia. Had she possessed command of the sea, who can doubt that before this she would have been victorious in the present struggle? The British Fleet denied victory to her, and for that reason we have been exposed to German hatred, while at the same time being spared the suggestion that we should make a separate peace—a suggestion which has been made in turn to each and all of the Powers fighting with us. We may well be proud of that distinction, which we owe to the Fleet.

When we review the assistance which we have been able to give to the Allied cause, we do well not to focus our gaze on the length of line we are holding in France, nor on the heroic struggle in the Gallipoli Peninsula, nor even to be content with glancing at the widespread military movements in which our troops have been engaged in Asia, Africa, and the Pacific. Some years ago the late Lord Salisbury advised the British people to study large maps. It is even more important that they should study large charts. We can only form a correct appreciation of the services which we have rendered if, without ignoring our maps, we turn to the charts which show the great oceans covering nearly three-quarters of the earth's surface. Thereon we can trace the source of the power which has constituted this country the main support of the Allied cause since hostilities opened on August 4th, 1914. North, east, south, and west, the British Navy has ruled with absolute sway, so far as Germany and Austria-Hungary have been concerned, and in virtue of that rule we and the Allies have been drawing from the oceans invincible swords with which our enemies will be struck to the dust.

What would have happened if the British Fleet had remained neutral, or if, having entered upon the war, it had failed? These are considerations which merit examination, because only thus can a close approximation be reached to the services which the British Navy has rendered. If we had stood aside, or if the British Fleet had failed in its mission, Germany would have been supreme at sea. According to the very careful prophetic calculations which appeared in the last issue of THE NAVY LEAGUE ANNUAL, Germany and Austria in the spring of 1914 should have possessed forty-eight battleships of less than twenty years of age, while the battle strength of France and Russia would have been represented by twenty-eight battleships,

and even the adhesion of Italy would have brought the number up to only forty. Is it not apparent, however, that the command of the sea would, in the circumstances then existing, have been decided before Italy intervened, and that therefore probably that country would not have intervened at all? France and Russia, in other words, would not only have been cut off from the sea and all that it connotes of military, economic, and financial power, but they would have been exposed to all the dangers associated with naval inferiority. Of the weapons of sea-power, there is none greater than that of military surprise. Germany would have possessed the incalculable advantage of being able to land troops, owing to her great mercantile marine and her control of sea communications, at carefully chosen points on the coasts of France and Russia, thus taking in the rear or on the flank the armies of her opponents.

Even those who have watched most closely the unfolding of the great war drama have hardly comprehended how narrowly Germany missed the chance of obtaining command of the sea, even though we had taken our stand beside Russia and France when the final crisis arose. Possibly the most conspicuous evidence which can be produced in this connection consists in the shipbuilding programme of Britain and Germany from the year following the passing of the first German Navy Act, April 10th, 1898, down to the adoption of the *Dreadnought* design :

Mixed Armament Period.	GREAT BRITAIN.				GERMANY.			
	Battleships.	Armoured Cruisers.	Protected Cruisers.	Destroyers.	Battleships.	Armoured Cruisers.	Protected Cruisers.	Destroyers.
1899-1900 . . .	2	2	1	—	3	—	2	6
1900-1 . . .	2	6	1	5	2	—	2	6
1901-2 . . .	3	6	2	10	2	1	3	6
1902-3 . . .	2	2	6†	9	2	1	3	6
1903-4 . . .	5	4	4†	15	2	1	2	6
1904-5 . . .	2	3	—	—	2	1	3	6
	16	23*	14	39	13	4	15	36

* The experience of war has shown that armoured cruisers cannot be regarded as substitutes for battleships, nor did the Admiralty build these twenty-three vessels as such; six of the armoured cruisers were given no gun more powerful than the 7.5-in., and eight others had only 6-in. guns.

† These vessels were scouts of small displacement—2,850 tons.

This parallel bears eloquent testimony to the tendency which persisted throughout these six years, when Germany was steadily rising to an establishment of 38 battleships, 16 large cruisers, 30 small cruisers, and 144 destroyers. The British Fleet possessed, it is true, a large accumulation of battleships laid down in the years which preceded the new naval movement in Germany, including the six *Oceans* and the six *Duncans*—both classes lightly armoured—and the nine *Majestics* and the *Swiftsure* and *Triumph*, purchased in December 1903 ; but in the passage of time those battleships would have become obsolescent. At the moment when the necessity arose for replacing them by new units we might have had no longer either the instinct or the industrial capacity to enable us to reassert our supremacy at sea, for Germany was steadily developing her resources.

In studying these figures, it is, moreover, impossible to ignore the political conditions which then existed in Europe. Great Britain still maintained her position of "splendid isolation," and it was on the continuance of the enmity—resting on tradition rather than clashing policy—which existed between this country, on the one hand, and practically all the European Powers, on the other, that those responsible for the renaissance of the German Fleet placed their reliance.

Our sea-power, as represented in modern, first-class battleships, was slipping from us when the struggle between Japan and Russia opened in 1904. The war was waged by land and by sea. The lessons drawn from successive naval actions showed that our supremacy (our world-wide interests entailing dispersion of force as contrasted with Germany's policy of concentration) was in even greater danger than was generally appreciated by those who had studied most carefully the course of naval events during the preceding six or seven years. We were confronted with a race against time, for there was no saying what successes German diplomatists might not achieve in arraying against us a formidable combination of powers. Weakness of a great and rich Power always invites inimical combinations against it.

Fortunately both the Foreign Office and the Admiralty realised the peril. This is neither the time nor the place for reviewing the changes which occurred in our foreign relations. It is sufficient to note that they undermined

the political basis upon which Germany counted when she determined to endeavour to snatch from us the trident, assuming with confidence that owing to our heavy responsibilities in every sea we should not "be in a position to concentrate all its (our) striking power against Germany." The immediate purpose is to trace the steps by which we placed ourselves in a position to secure the command of the sea when at last, after long preparation for war, Germany threw down the gage.

Is it realised that a period of only seven years separated us from a state of naval weakness and a state of naval strength which robbed Germany of the spoils of victory? * Details have been given illustrating the condition to which our battle-fleet was being reduced when the war in the Far East occurred. How was the balance readjusted? The Admiralty had before it two alternatives. It could either bring in costly programmes to overtake the arrears in battleship construction which had accumulated, or it could boldly determine to introduce a new type of ship which would render it unnecessary to incur the expense involved in making good those arrears. The latter course was adopted. Morokes stated a quarter of a century ago that "naval tactics are based upon conditions, the chief causes of which, namely the arms, may change; which, in turn, causes necessarily a change in the construction of ships, in the manner of handling them, and so finally in the disposition and handling of fleets." † The Germans having, as they thought, got everything in train to suit them, the Admiralty determined on changing "the arms," and thus revolutionised all the naval conditions, to Germany's eventual undoing.

In all secrecy the *Dreadnought* and her three swifter sister-ships were laid down. While the Admiralty guarded the details of the designs, it made no secret of the effects which the appearance of these new types would have on the battle-fleets of Germany and other Powers, rendering them, it was reported, obsolete. The result was that the designing of battleships abroad was arrested—and arrested

* The *Dreadnought* policy was inaugurated in 1905. Between the publication of a programme and the completion of the large armoured ships comprised in it intervenes a period of three years, and consequently in the summer of 1914 we profited at sea only by the ships of the 1911-12 Estimates, and not all of the 1911-12 ships were, in fact, completed when war occurred. Consequently as a result of seven years' work we attained our lead in *Dreadnoughts*.

† "The Influence of Sea Power upon History" (Mahan).

for nearly eighteen months. It appeared to many persons at the time as though the naval authorities had announced to the world, "We will start a new race for naval power on equal terms," and that thereby other countries were given an advantage. In effect, however, what the Admiralty did was to announce that a new race for naval supremacy was going to begin, while concealing from the other competitors what ships it would enter for the contest. This decision was taken in 1905, and the war came in 1914. Only success could justify such a dramatic act. We now know that success was achieved, and that the *Dreadnought* and her sisters, in association, of course, with other men-of-war, have saved not only the British Empire, but the world, from Teutonic domination.

The course of events during these critical years when we were swapping horses, while crossing the political stream is not without interest. In the first place, the constructional revolution became known too late to save Germany from laying down under her 1905-7 programmes two battleships—the *Schlesien* and *Schleswig-Holstein*, of 13,000 tons, each armed with only four 11-in. guns, and two armoured cruisers, the *Scharnhorst* and *Blücher*, carrying no weapon more powerful than the 8·2-in. gun. In the second place, in spite of her agents, who were very active at that time in this country, Germany failed to probe the real secrets of the *Dreadnought* design. After eighteen months' inactivity she thought she was near the truth, and she adopted the design utilised in the four ships of the *Posen* type. Mr. Churchill declared, apparently with the concurrence of his naval advisers, that the gun-power of these early German *Dreadnoughts* is approximately equal at 10,000 yards to that of the *Lord Nelson* and *Agamemnon*.* We persisted in the comparatively slow construction of ships of the new type down to the spring of 1909, and in the meantime Germany had passed a new Navy Law reducing the age of battleships on the effective list from twenty-five to twenty years, thus giving her an excuse for accelerating her programme.

The British Admiralty at once replied to this new challenge, and the naval crisis of 1909 occurred, when the Board of Admiralty, with the present Lord Fisher as First Sea Lord, was supported by the most long-sighted and intelligent

* House of Commons, July 17th, 1913.

section of the public, and no fewer than eight *Dreadnoughts* were laid down. Speaking from the Treasury Bench in the House of Commons in the year preceding the outbreak of war, Mr. Churchill, turning to his predecessor at the Admiralty, Mr. McKenna, remarked ;

I do not believe that there has been taken in recent times any more daring, and certainly there has been no more successful step in naval policy than that which was taken by him on the advice of the then First Sea Lord (Lord Fisher) in making that great advance with the eight ships of the 1909-10 programme and increasing the size and increasing the gun-power of those vessels. That was a most bold and decisive step ; it was a big step forward ; and it has had the result that we have sixteen ships built and building, armed with 13'5-in. guns, which will be afloat before any ship armed with a weapon of similar power is on the water or in possession of any other naval Power.

Since the beginning of the present struggle the nation has had good reason to re-echo those words. The decision of the Board of Admiralty in 1909 may be regarded as the final act which condemned Germany to naval inferiority and to impotence, though it must not be forgotten that, too late to influence the issue in August 1914, the Board presided over by Mr. Churchill determined upon introducing the 15-in. gun from which to-day we are reaping the advantage. The 1909 programme was followed by others (1910-14, four years) which provided nineteen more units as compared with thirteen laid down by Germany in the same period. By these steps, in a period of nine years only, we built or were in process of building a battle-fleet overwhelmingly superior to that of Germany, while simultaneously the Foreign Office created an international atmosphere which enabled us on the outbreak of war to defeat Germany's expectations and concentrate practically all our large armoured ships in the vicinity of the North Sea.

But that does not complete the story. There had been some sort of understanding, more or less strictly observed, that the British Fleet in relation to that of Germany should possess a margin of strength of about 60 per cent.—a margin which might have proved demonstrably inadequate in possible circumstances in view of the whole-world needs of the Navy. In August 1914 the Admiralty under Mr. Churchill raised it by a dramatic *coup*. It happened that

there were three battleships building in this country for foreign nations—two for Turkey and one for Chile. The Admiralty at once exercised the right of pre-emption, and thus three more powerful ships, over and above the Admiralty's programmes, were added to the flag.

It is not permissible to speculate as to the relative strength of the fleets which now confront each other in the North Sea, but since the enemy possesses our Parliamentary Reports there can be no objection to quoting the interesting forecast as to our *Dreadnought* strength in relation to that of Germany which was made by Mr. Churchill in the House of Commons on March 31st, 1913. He included in the British strength of *Dreadnoughts* the two *Lord Nelsons*, the *New Zealand*, the *Australia*, and the *Malaya*, when completed, and he made the following statement of relative strength during the present year :

1915.	Britain.	Germany.	Surplus over 60 per cent.
First quarter	38	21	5
Second quarter	38	23	2
Third quarter	39	23	3
Fourth quarter	41	23	5

These calculations are interesting, but form no absolute guide to the strength in the present year in ships of the *Dreadnought* type of the two Navies which confront each other in the North Sea. They leave out of account losses which have been sustained—Germany, for instance, can no longer count upon the *Goeben*, if indeed the *Von der Tann* is not also *hors de combat*, and the proportions have been varied by the addition to the British Fleet of the three purchased battleships, *Erin*, *Agincourt*, and *Canada*. But in spite of these variations the figures are of value as a rough-and-ready guide—with such corrections as readers can themselves make by reference to the list of losses given elsewhere in the ANNUAL—to the position now existing in the North Sea so far as ships of the all-big-gun type are concerned, it being recalled that the British ships have a great advantage in long-range gun-fire.

But the important element of British sea-power is not the ships; essential though they are, but the officers and men. Whatever mistakes in naval policy Mr. Churchill may or may not have committed, the nation owes to him

a debt of gratitude for the persistence with which during his period of office at the Admiralty he demanded from Parliament repeated increases of the personnel, while at the same time making more adequate provision in respect of pay and laying on a surer foundation the system of promotion from the lower deck to commissioned rank. The German Press revealed the anticipation entertained by the Marineamt that when war came, though we might possess ships, we should be unable to man them. That anticipation was not fulfilled. The conditions which existed on the outbreak of hostilities are now no mystery. They corresponded with some accuracy; it need not be doubted, with the very interesting particulars which were given by Mr. Churchill in the House of Commons on March 31st, 1913 :

There are to-day actually 139,000 men—there are a few over—but there are 139,000 men of all ranks and ratings on the active-service personnel of the Navy. Of these approximately 95,000 men are actually on board sea-going ships and 44,000 men are in harbour ships, barracks, training ships, and coastguard stations.

If a general mobilisation of the Fleet took place to-morrow, 12,000 men out of the 44,000 men who are in harbour ships and on shore would suffice to complete the establishment of the Second Fleet to the full war strength and active-service personnel, and these 12,000 would be immediately available for this purpose.

Of the remainder, after providing the proper proportion for the ships of the Reserve Fleet—the Third Fleet—and after eliminating the non-effectives, we are left with a balance of some thousands of men for shore duties and for new vessels approaching completion.

I must remind the House that the First and Second Fleets to-day comprise 90 per cent. of our fighting strength, and that, in order to complete them with all their details, it would be only necessary to draw 12,000 men out of the 44,000 available.

In the interval between that statement and August 1914, additional officers and men finished their training, with the result that the personnel of the Fleet was in an even more satisfactory condition than when Mr. Churchill spoke. We possessed not only quantity but quality. There is official authority for the statement that "the service and training of every man of the British Fleet averages at least twice and probably three times as great as that of the personnel of any other Navy in the world."* The

* Mr. Churchill, House of Commons, March 26th, 1913.

nation may be proud of its ships, but the real foundation of its pride should be, and in most cases is, the officers and men who convert that scientific ironmongery into deadly weapons of war—the attainments, courage, and resourcefulness of the officers, and the splendid efficiency of the crews, their devotion to duty and the cheerfulness with which they have met new and unexpected developments of naval warfare.

In these conditions as to ships and men, the British Navy confronted the enemy in August 1914 and gained, as has been said, the initiative. It is now placed beyond doubt that we owe the advantage in time and place which we then obtained to the prescience of Admiral Prince Louis of Battenberg, then First Sea Lord, who gathered for us the fruits of the naval policy which had been pursued during preceding years. Mr. Churchill, owing to unavoidable circumstances, was absent from town during the fateful weekend, but he completed and consolidated, on his return to the Admiralty, the triumph of British sea power, which immediately stood out as the decisive element in the war.

The period of hostilities has been marked by no great battle at sea. The matter is of slight importance—battles are merely a means to an end, and that end is the right to use the sea for military and commercial purposes. The naval situation which existed in August 1914, and which exists to-day, has been described by Count Reventlow, who is reputed to enjoy the confidence of Grand Admiral von Tirpitz. In an article in which he reviewed the work of the two Fleets in the first year of war Count Reventlow made the following confession, than which there has been no more significant statement during the past eighteen months:

When, a year ago, the German Fleet entered the great contest, it was not in a state of completion, as many persons abroad believed it to have been. At that time the German Fleet had been for some fifteen years in the process of being regularly built up, for the "big navy" Bill had not become law until the summer of 1900. . . . It was calculated at that time that the rebuilding of the Fleet would be completed in 1920.

In 1905, however, came the great *Dreadnought* revolution in shipbuilding, which quickly rendered worthless all ships built before that time (pre-*Dreadnoughts*) and compelled tremendous enlargements of wharves, harbours, and canals, gigantic exten-

sion of organisation, etc. The work of completing the German Fleet would have extended itself beyond the year 1920 under these conditions. If one, furthermore, takes into consideration that, as the authorities of all lands acknowledge, experience shows that it requires not fifteen but thirty years to build up a Fleet, with everything that belongs thereto on water and on land, it is clear that the German Fleet was far from being ready in the summer of 1914.

And to this must be added a fact that has been overlooked. In 1900, when the strength of the German Fleet was decided on, the relations of England to France and to Russia were bad. England had to maintain strong fleets in the Mediterranean and in East Asia. The alliance with Japan was not yet in existence. If these conditions had persisted, Great Britain could have used only a part of its Fleet in a war with Germany. Since, however, Great Britain desired to attack Germany when the proper time came, it allied itself at the right moment with Russia, France, and Japan, and was thus able to use its entire Fleet against Germany and Germany's Allies from August 1914. Then in the course of the war Italy came in with its considerable Fleet.

In these words of Count Reventlow, who frequently uses his pen with unfortunate results for his country, we have a full reflection of the unfavourable conditions which confronted the German Fleet when the war opened, and of the complete success of British naval and foreign policy, to the undoing of Germany's plans. The *Dreadnought* delayed the realisation of Germany's plans, as he suggests, by about ten years.

Has the British Fleet performed all that the nation had any right to expect it to perform? It had been realised that when war occurred the country would be menaced by four perils:

1. Invasion of these islands or distant parts of the Empire.
2. Isolation, by the cutting of communications between the Mother Country and the oversea Empire.
3. Military negation, in consequence of the inability to employ military power oversea.
4. Starvation through the destruction or shutting off of ships bringing food to the United Kingdom.

To what extent has the Navy warded off these perils? There is high authority for considering in combination the

two perils of invasion and starvation. In a memorandum which he drew up towards the close of 1910, Admiral of the Fleet Sir Arthur Wilson, then First Sea Lord, remarked:

The really serious danger which this country has to guard against in war is not invasion, but interruption of our trade and the destruction of our Merchant Shipping.

The strength of our Fleet is determined by what is necessary to protect our trade, and, if it is sufficient for that, it will be almost necessarily sufficient to prevent invasion, since the same disposition of ships to a great extent answers both purposes.

The main object aimed at by our Fleet, whether for the defence of commerce or for any other purpose, is to prevent any ship of the enemy from getting to sea far enough to do any mischief before she is brought to action. Any disposition that is even moderately successful in attaining this object will almost certainly be effective in preventing a large fleet of transports, than which nothing is more vulnerable or more difficult to hide, from reaching our shores.

The war has illustrated the correctness of these views. The Grand Fleet, with the cruiser squadrons, patrol vessels, and mine-sweepers, has protected us from invasion and starvation, it has also prevented the enemy from getting across the main tracks of ocean communication and thus isolating the Empire overseas from the Mother Country. At the same time, the policy of concentration, which has resulted in the "containment" of the main fleet of the enemy, has guarded us from a condition of military negation.

Within three days of the beginning of hostilities the Admiralty, with a courage to which future historians will pay their tribute, gave the Expeditionary Force a pledge of safe conduct to France; during the succeeding 500 or 600 days and nights, without intermission, transports and store ships, under the guardianship of the Fleet, have been steaming from these shores across the Channel. So far as is known not a single life has been lost during these unparalleled transport arrangements owing to any failure of the Navy to make good its pledge. Nor is this all. When, for high political reasons, it was determined to force the Dardanelles, the Fleet did not recoil from the additional responsibility of giving safe conduct to thousands of troops to southern waters, although German submarines appeared in the Ægean Sea, complicating the Navy's problem. Later

on it had to shepherd the transports to Salonica. Even this does not complete the narrative of the translation of our naval power into military power. The Navy has been the guardian of long processions of transports which have carried troops to Egypt and to India, and has brought to the Continental battlefields thousands of fighting men representing the best manhood of the great self-governing Dominions.

Perhaps the most notable feature of the naval war has been that the Germans have made no attempt to dispute our command of the North Sea. They lost the initiative—"the advantage of time and place"—which was to have been utilised for dealing "a bolt from the blue" at some detachment of our forces before mobilisation and concentration had been effected. It was officially announced that, failing the attainment of that end, sections of the enemy's battle-fleet would from time to time sally out into the North Sea in accordance with the intention of waging a war of attrition. That policy also has so far failed. The battle-ships of Germany have never once cruised beyond the influence of the shore defences, the elaborate scheme of mine-fields, and the range of the home flotillas of submarines. The battle-squadrons to which the Marineamt devoted so much attention have remained inactive during the course of the war.

It is an interesting subject for speculation whether the Germans have gained any advantage from the existence of these ships and whether they would not have been as secure from invasion had they relied only on their coast defences, provided with long-range 11-in. guns, and their mobile flotillas in home waters. The statements made by German writers, who are understood to draw their inspiration from the Marineamt, suggest that the war may close without Germany's main battle-squadrons having accepted the challenge which the Grand Fleet under Admiral Sir John Jellicoe has persistently offered. Whether, on the other hand, hostilities will come to a close without any endeavour on the part of the British forces to get to close quarters to the enemy, in spite of the protective shields, is a matter upon which no opinion can be expressed. But the dominating fact is that since the war began the German battle-fleet has accepted conditions of inactivity which must have proved a sore trial to the German people, familiar

with the terms of successive naval memoranda and the boastful speeches of the Kaiser and Grand Admiral von Tirpitz.

No naval incident of first-class importance has occurred in the North Sea. Such encounters between battle-cruisers, cruisers, and destroyers as have been reported have been of greater moral than material significance. This conclusion is illustrated by the action in the Bight of Heligoland on August 28th and by the successive "hussar thrusts" by swift enemy squadrons, which, crossing the North Sea in the darkness, bombarded English coast towns and fled precipitately on the appearance of British forces. In each of these cases the enemy was confronted with superior power. This was no matter of good luck but of good strategy, and conveyed to the enemy, apart from the losses incurred, the salutary lesson that his ships were safer and surer of gaining tinsel glory in the eyes of the deluded population if they remained in harbour, conveying at least a suggestion of menace to the British Fleet.

On the other hand, the period during which we have contained the enemy's battle-squadrons has not been devoid of its trials, and it may be that history will reveal that errors in strategy and in tactics have been committed. But the time has not come when history can be written in full knowledge of the orders of superior authority and the actions of the officers at sea. For the time being the nation may well be content with the reflection that though ships have been lost, as, for instance, the three cruisers of the *Cressy* class, the *Hawke*, the *Formidable*, and the *Pathfinder*, neither of these incidents, though deplorable loss of life occurred, had any effect on our command of the sea, which has been exercised in fair weather and in foul, under the conditions of winter and under those of summer, with a success without its parallel in the history of naval warfare.

So much for the main theatre of the naval war. The enemy's operations against British commerce may be divided into two periods. In the first, the Germans used their cruisers on foreign stations, and when, in course of time, these vessels were rounded up and sunk by the British Fleet, they inaugurated a new form of piracy conducted by means of submarines.

That the two phases did not coincide suggests interesting

reflections. It can hardly be doubted that the Marineamt was surprised by the success achieved by underwater craft during the early period of the war, and, in particular, by the *coup* which resulted in the destruction in quick succession of no fewer than three large, if obsolescent, British cruisers. Though Grand Admiral von Tirpitz is a torpedo specialist, he regarded the submarine for several years with disfavour. The early movement in France for the creation of large submarine flotillas was looked upon by German naval officers of high standing with a feeling little removed from contempt. Even when at last the United States, and later on Great Britain, decided to build submarines, the Marineamt held its hand. The new policy—which was inaugurated by the British Admiralty in 1901, when small submarines of the *Holland* type were laid down at Barrow, was commented upon in Germany as being that of a Power which was adopting a defensive weapon of an untried type. It was even suggested that the new departure indicated that the British Admiralty was no longer confident in the ability of the British Fleet to perform its immemorial mission, and that the submarine had been welcomed as offering an additional measure of security against invasion in view of the moral menace which it constituted.

The German naval authorities persisted in their attitude towards submarine craft for a period of five years. Experiments with small ships of the *Nordenfjeldt* type had been carried out in the early nineties with disappointing results. The Marineamt was convinced on the evidence thus obtained that the submarine would not add to the power of the German Fleet, and they remained of this opinion during the early years when the British Admiralty were engaged in developing British flotillas, and were encouraged possibly in maintaining their rigid opposition by the losses incurred with British submarines. The result of the delay in constructing underwater craft was conspicuous at the opening of the war. In August 1914 the Germans possessed less than thirty submarines, while the British Navy had over seventy. It cannot be doubted that after the sinking of the three *Cressys* the Germans at last realised that the submarine might prove a weapon of military importance in a war of attrition, and offered peculiar attractions to a Power relying in large

measure on a policy of "frightfulness." The development of the new policy took time.

The first phase of Germany's warfare by cruisers on British commerce proved a military failure; though the British mercantile marine suffered losses, perhaps unnecessarily heavy losses—they were not as serious as the British people had been led to anticipate, and they certainly did not realise the hopes entertained by the Marineamt. It need not be doubted that the war, occurring when it did, found the German naval authorities unable to put into execution the plans for interrupting our sea commerce which had been drawn up. The Grand Fleet in obtaining the initiative not only reduced the High Sea Fleet to impotence, but prevented the dispatch from North Sea ports of cruisers and armed merchantmen which it was intended to throw out on the trade routes. The purpose was not merely to do injury to British shipping, but by a series of dramatic blows, in home and foreign waters, to create psychological results of a widespread character. It was assumed that if, in the early days of the war, German armed ships could produce by their successes something resembling a panic in the British mercantile marine, ship-owners would be rendered nervous, refusing to run risks, with the result that British supplies of food and raw material would be endangered and the war would open in conditions favourable to Germany. It was thought that a shortage of supplies would lead to unemployment and that unemployment would culminate in riots, a mad democracy turning against the Government for entering into the war and the Admiralty for not making more adequate arrangements for policing the seas. This elaborate scheme failed, and the failure may be traced to the decisive orders which resulted in the British Fleet obtaining the advantage of initiative in the North Sea, thus preventing the Germans from letting loose a host of commerce raiders.

In the circumstances the war on British commerce had to be entered upon with very restricted forces, namely, the ships which happened already to be in foreign waters. Immediately hostilities occurred the German Government was isolated, except for wireless telegraphy, from its foreign-service ships, as from its colonies and its mercantile marine in distant waters. The war vessels were from the first doomed because in the circumstances created by the British

Admiralty they could not exist for more than a limited period. Consequently the enemy, unable to provide his merchant ships with adequate protection, directed them by wireless to shelter in convenient neutral ports, while the men-of-war were sent to sea to do what damage they could during the short existence which they might be able to preserve.

When hostilities broke out the Germans had too few cruisers at sea to carry out an effective policy, and too many to lose without hope of previously obtaining any military advantage. On August 4th, 1914, Germany had the following men-of-war on duty in foreign waters* (the speeds of the cruisers being indicated):

Far East	.	.	.	<i>Scharnhorst</i>	Armoured cruiser (22.5 knots).
"	.	.	.	<i>Gneisenau</i>	Armoured cruiser (23.5 knots).
"	.	.	.	<i>Emden</i>	Light cruiser (24 knots).
"	.	.	.	<i>Nürnberg</i>	Light cruiser (23 knots).
"	.	.	.	<i>Illus</i>	} Gunboats (old).
"	.	.	.	<i>Jaguar</i>	
"	.	.	.	<i>Tiger</i>	
"	.	.	.	<i>Luchs</i>	} Torpedo-boat destroyers.
"	.	.	.	<i>S. 90</i>	
"	.	.	.	<i>Taku</i>	
Australasia	.	.	.	<i>Geier</i>	} Gunboats (old).
"	.	.	.	<i>Cormoran</i>	
West African Coast	.	.	.	<i>Eber</i>	Gunboat (old).
East African Coast	.	.	.	<i>Königsberg</i>	Light cruiser (23.5 knots).
West Coast of America	.	.	.	<i>Leipzig</i>	Light cruiser (23 knots). Attached to China squadron.
East Coast of America	.	.	.	<i>Karlsruhe</i>	Light cruiser (28 knots).
"	.	.	.	<i>Dresden</i>	Light cruiser (24.5 knots).

Owing to circumstances which are not at present clear, most of these German cruisers managed to get on the trade routes and to do a considerable amount of damage to British commerce. But one point may be noticed: these activities occurred during the period when the British Navy was either actually engaged in, or making dispositions for, the transport of troops from the distant Dominions, India, and Egypt, to Europe. During the weeks ~~when~~ these operations were in progress and it was realised what a serious menace the German cruisers constituted to the transports, the responsibilities which pressed upon the British Navy were great. This circumstance cannot be ignored when studying the comparatively long careers which some of the enemy ships, particularly the notorious

* In addition, the Germans converted a number of merchant ships into armed vessels, the conversion being carried out either in neutral waters or on the high seas.

Emden, enjoyed. The captain of the latter vessel illustrated the methods which can be employed with success even in these days of steam navigation by a small armed ship. Moreover, he committed his depredations on British commerce without any serious infraction of either the dictates of humanity or international law. He was at last run down and destroyed off Cocos Keeling Island on November 9th, owing to an error of judgment which led him, apparently without excuse, to quit the seas and embark on an amphibious operation of no great importance.

With the destruction of the *Emden* by the Australian cruiser *Sydney*, the most successful of the commerce-raiders ended its career. This successful *coup* was unfortunately preceded by a regrettable incident off Coronel, which will be regarded by future historians as probably the most deplorable event in the early period of the war. In circumstances which have not yet been explained, Admiral Sir Christopher Cradock, who had been engaged in watching operations off the Mexican coast, was left with an entirely inadequate force under his orders in spite of the knowledge of the strength which the enemy might at any moment concentrate against him. On November 5th the Admiralty informed the public of the inevitable sequel of the faulty disposition of ships. It was officially announced that the Germans, apparently through their wireless service, claimed that an action had been fought off the Chilian coast. Later on it became known that Admiral Count von Spee had concentrated a powerful squadron, consisting of the two armoured cruisers from Tsingtao, together with some light cruisers, with the intention of fighting Admiral Cradock's squadron with an assurance of victory. The result was that the two large British ships, the *Good Hope* and *Monmouth*, were sunk with all hands. On November 18th full details were published, consisting of a log prepared by Captain John Luce, in command of the cruiser *Glasgow*, one of the vessels of the British squadron. Captain Luce's narrative is a document of the greatest historical and human interest, and in view of the events which followed no apology is needed for reproducing it:

Glasgow left Coronel 9 a.m. on November 1st to rejoin *Good Hope* (flagship), *Monmouth*, and *Otranto* at rendezvous.

At 2 p.m. flagship signalled that apparently, from wireless calls, there was an enemy ship to northward.

Orders were given for squadron to spread north-east by east in the following order: *Good Hope*, *Monmouth*, *Otranto*, and *Glasgow*, speed to be worked up to 15 knots.

4.20 p.m. saw smoke; proved to be enemy's ships, one small cruiser and two armoured cruisers. *Glasgow* reported to Admiral, ships in sight were warned, and all concentrated on *Good Hope*.

At 5 p.m. *Good Hope* was sighted.

5.47 p.m. squadron formed in line-ahead in following order: *Good Hope*, *Monmouth*, *Glasgow*, *Otranto*.

Enemy, who had turned south, were now in single line-ahead twelve miles off, *Scharnhorst* and *Gneisenau* leading.

6.18 p.m.—Speed ordered to 17 knots and flagship signalled *Canopus*: "I am going to attack enemy now."

Enemy were now 15,000 yards away and maintaining this range, at the same time jamming wireless signals.

By this time sun was setting immediately behind us from enemy position, and while it remained above horizon we had advantage in light, but range too great.

6.55 p.m.—Sun set and visibility conditions altered, our ships being silhouetted against afterglow, and failing light made enemy difficult to see.

7.3 p.m.—Enemy opened fire 12,000 yards, followed in quick succession by *Good Hope*, *Monmouth*, *Glasgow*.

Two squadrons were now converging, and each ship engaged opposite number in the line. Growing darkness and heavy spray of head sea made firing difficult, particularly for main deck guns of *Good Hope* and *Monmouth*.

Enemy firing salvos got range quickly, and their third salvo caused fire to break out on fore-part of both ships, which were constantly on fire till 7.45 p.m.

7.50.—Immense explosion occurred on *Good Hope* amidships, flames reaching 200 feet high. Total destruction must have followed. It was now quite dark.

Both sides continued firing at flashes of opposing guns. *Monmouth* was badly down by the bow, and turned away to get stern to sea, signalling *Glasgow* to that effect.

8.30 p.m.—*Glasgow* signalled *Monmouth*, "Enemy following us," but received no reply.

Under rising moon enemy's ships were now seen approaching, and as *Glasgow* could render *Monmouth* no assistance she proceeded at full speed to avoid destruction.

8.50 p.m.—Lost sight of enemy.

9.20 p.m.—Observed seventy-five flashes of fire, which was, no doubt, final attack on *Monmouth*.

Nothing could have been more admirable than conduct of

officers and men throughout. Though it was most trying to receive great volume of fire without chance of returning it adequately, all kept perfectly cool, there was no wild firing, and discipline was the same as at battle practice.

When target ceased to be visible, gunlayers spontaneously ceased fire.

The serious reverse sustained has entirely failed to impair the spirit of officers and ship's company, and it is our unanimous wish to meet the enemy again as soon as possible.

Two days before this action was fought a dramatic change had occurred in the Board of Admiralty. Prince Louis of Battenberg, inspired by feelings of the loftiest patriotism, had resigned and been succeeded by Lord Fisher as First Sea Lord. This event at Whitehall was completely overshadowed when news was received of the disaster which had overwhelmed the *Good Hope* and *Monmouth*, confronted with hopeless odds. A period of complete silence supervened, but in the meantime the Admiralty had been active, and orders had been given for avenging Admiral Cradock and his heroic officers and men. On November 11th, unknown to the British people and unknown to the enemy, Vice-Admiral Sir Doveton Sturdee, who had been serving as Chief of the Naval War Staff, left England with the battle-cruisers *Invincible* and *Inflexible*, with instructions to meet and defeat Admiral von Spee's squadron. This movement will stand out in after years as one of the greatest strategical surprises which history records. Not a whisper of the dispatch of these ships, of their movement southward, or of the concentration with other cruisers, reached either the naval staff in Berlin, the German agents in the United States and in the Republics of the south, or the admiral commanding the enemy's squadron, who was so soon to pay the price of his late victory. Elsewhere in THE NAVY LEAGUE ANNUAL Admiral Sturdee's dispatch is published. It reveals the nicety with which the strategical movement was calculated so as to correspond with the unknown movements of the enemy's squadron. It also shows with what precision the two battle-cruisers met the needs of the tactical situation which developed when Admiral von Spee, unconscious of the character of the force to be opposed to him, approached Port Stanley (Falkland Islands), Admiral Sturdee's place of call in anticipation of his trial of strength with the enemy. With the almost complete

defeat of this squadron—for only the *Dresden* escaped, to be destroyed later on off Juan Fernandez Island—the first phase of Germany's war on British commerce closed.

In parenthesis some remarks may be appropriate before proceeding to discuss the later—the submarine—phase of Germany's campaign on our mercantile marine. What manner of ship was it which overwhelmed the German light cruisers in the Bight of Heligoland, which sank the *Blücher* and damaged two others of the German raiders in the North Sea, and was instrumental in sinking four out of five of Admiral Count von Spee's squadron? It may be said that the battle-cruiser is neither a battleship nor a cruiser. On the other hand, it may with more force be contended that she is both, since she can perform the duties of a heavy cruiser, as in the case of the Falklands action, and can also take her place in line of battle. She carries guns of the same calibre as the battleship, but somewhat fewer of them, and she is less heavily armoured; but on the other hand, she possesses far greater speed. The relation between the battleship and the battle-cruiser may be illustrated best by contrasting the latest British battleship for which accurate figures are available with the last British battle-cruiser to be completed before the outbreak of war. Official figures as to both these ships—the *Audacious*, of the *King George V* class, and the *Queen Mary* (sister ship to the *Tiger*)—are available, and enable an effective contrast to be made. The former was given a displacement of 23,000 tons and a speed of 21 knots, and was armed with 10 13·5-in. and 16 4-in. guns, being provided with a 12-in. armoured belt; the latter was designed for 27,000 tons, with a speed of 28 knots, and mounts 8 13·5-in. and 16 4-in. guns, her armoured belt having a thickness of 9 in. Consequently the *Queen Mary* displaces 4,000 more tons and possesses 7 knots more speed, but, on the other hand, she has 3 in. less armour, carries two fewer battle-guns, and has only two instead of three torpedo-tubes. The shaft horse-power of the battleship was stated to be 27,000 and of the battle-cruiser 75,000. These figures illustrate the influence on the engine design of the effort to obtain the battle-cruiser's high rate of steaming. Owing to her engine power and high fuel consumption the *Queen Mary* has to carry a far larger load of coal and oil. These two factors in association explain the increased

displacement of the battle-cruiser in contrast with the battleship, although the battleship carries more armour.

Both ships cost approximately £2,000,000 each. The incidence of expenditure is interesting and is revealed in the following comparative statement, based on official figures :

	<i>Queen Mary.</i>	<i>Audacious.</i>	Contrast.
	£	£	£
Hull, armour, and equipment	1,083,000	1,077,000	6,000
Propelling machinery, etc.	510,000	274,000	236,000
Guns	118,000	144,000	26,000
Gun mountings and torpedo-tubes	342,000	437,000	95,000
Incidental expenses	36,000	33,000	3,000
	2,089,000	1,965,000	—

A battleship or battle-cruiser is merely a platform for carrying guns. The guns cost about one-third of the sum which the gun mountings involve, and the guns and gun mountings together represent less than a quarter of the total amount spent upon the complete ship, although their number and calibre exercise considerable influence upon the size of the vessel, since, unless there is to be serious gun interference, a specified amount of deck space must be provided. Summarising these contrasted figures, it will be seen that the *Queen Mary*, owing to her more powerful engines, and therefore bigger boiler-room, displaces 4,000 more tons than the *Audacious*, though her armour is much thinner; but she has 6 or 7 knots more speed, involving a direct additional charge of nearly £250,000, which is reduced by the economy due to her lighter armament of battle-guns.

Though no naval battle on a grand scale has occurred, the Admiralty have been able to find most effective employment for the battle-cruisers of the British Fleet. Their speed enabled big guns to be brought swiftly to the scene of action in the Bight of Heligoland, in August 1914, when the engagement, in which British light cruisers and destroyers were taking part, had, in the words of Sir David Beatty, reached a "critical" stage. When Admiral Count von Spee was met with off the Falkland Islands, the speed of the battle-cruisers prevented him from escaping when he discovered that he was confronted with superior power. The

contest in January last in the North Sea again showed the value of the British cruisers' high speed. When the German ships, including three of their latest battle-cruisers, found that they were in the presence of British vessels with superior gun-power, they retreated. Had the British ships not possessed superior speed—thanks to better engines and undoubtedly more efficient engine-room staffs—the Germans would have escaped; whereas, as it happened, they were slowly overhauled, the *Blücher* was sunk, and the *Seydlitz* and *Derfflinger* seriously damaged. That their losses were not more considerable has not yet been explained in any of the official reports. So much for the first phase of the naval war.

The first announcement of an intention to carry on a submarine blockade of the British Isles, destroying merchant ships steaming to and from British ports, was made by Grand Admiral von Tirpitz himself in an interview with a representative of the *New York Sun* which was published on December 23rd, 1914; but the official notification did not appear until February 4th. An interval of nearly five months elapsed between the opening of war and the announcement by the Naval Secretary, and then occurred another period of about six weeks before the blockade notice was issued and the operations began officially, although in the meantime several merchant ships had been destroyed. What is the explanation of the delay? Why did not the submarine piracy occur simultaneously with the cruiser operations against shipping in distant waters? If that dual policy had been adopted, a considerable impression would have been made upon the British people in the early days of the war, when their nerves were "jumpy," and cumulative psychological results might have been produced, apart from the more serious interference with our ocean commerce which would have occurred. Three assumptions are justified by the facts. In the first place, the Germans believed that their foreign-service ships, in association with the armed merchantmen which were at large, would produce more considerable dislocation in British shipping than, in fact, they did produce. In the second place, in the early period of the war they still entertained some contempt for the submarine as an untried weapon on which no great reliance could be placed. In the third place, when the war opened the enemy possessed less

than thirty submarines, and that number was inadequate for conducting such a campaign as was decided upon after the destruction of the three *Cressys* on September 22nd. Subsequent to the latter success, we need not doubt that a decision was reached to lay down a large number of submarines, which involved a retardation of the work on large ships. In other words, the odds against the High Sea Fleet were realised in the autumn to be so considerable that the Germans came to the conclusion that there was little hope of changing the balance of power by putting in hand additional battleships and battle-cruisers, and confided their hopes, in desperation, to the submarine, which was to be employed in a war of attrition against the Grand Fleet and our merchant shipping.

Towards the end of the year considerable progress ~~had~~ probably been made with the new submarines and a preliminary scheme of operations prepared; but it was not until the beginning of February that sufficient underwater craft had been completed to justify hopes that any impression could be made upon our ocean-borne supplies. It is not improbable that the German Naval Staff were misled by the sanguine anticipations indulged in by Admiral Sir Percy Scott in his famous letter to the *Times*, and that they had been impressed by a fanciful picture of the attack of submarines on British commerce which was written by Sir Arthur Conan Doyle in an unfortunate moment of misdirected patriotism. Nor must it be forgotten that a number of sensational articles published in this country, and professing to be based upon the lessons of the British naval manœuvres of 1913, had aroused great expectations as to the mission of the submarine. At any rate, the German Naval Staff was impressed, and the Naval Secretary had no hesitation in announcing that submarines were to be employed in destroying British merchantmen and that he was confident of his ability "to starve England."

The new policy could be carried on only by ignoring both the dictates of humanity and international law. In the course of all modern naval wars the weaker naval power has always devoted considerable attention to war on commerce—never with adequate military results, as Admiral Mahan has reminded us—but certain specific rules of seizure had always been hitherto respected, even by nations fighting in

a spirit of desperation. Customary procedure may be thus summarised :

First, the warship fires two blank charges; and, if this has no effect, a live charge is fired, not at, but across, the bows of the merchantman; if those shots have also no effect, then the merchantman is subjected to the worst consequences. She enjoys, however, the right to defend herself, under the rulings of the British and American Courts, by firing any guns she may possess or by using her helm, and thereby she does not lose her status and become subject to the penalties attaching to a man-of-war.

Second, the man-of-war must send a party on board the merchantman as soon as she has stopped.

Third, this party must examine the ship's papers and ascertain if she is a fair prize.

Fourth, if the search prove that she can be regarded as a prize, she must be taken into port and brought before a prize court, as has been our procedure with all German prizes; but if the man-of-war has no port convenient, the vessel may be sunk :

(a) After the passengers and crew have been removed, with an ample supply of food and other comforts, to a place of safety, which does not mean a small open boat exposed to sea and weather.

(b) After the ship's papers have been seized in order to be produced before the prize court.

During his successful career in the Far East, Captain von Müller paid punctilious respect to these principles. In announcing the submarine blockade, Captain von Behnke, then Deputy Chief on the German Naval Staff, after stating that "the waters around Great Britain and Ireland, including the entire English Channel, are hereby declared a military area," proclaimed that "from February 18th every hostile merchant ship in these waters will be destroyed even if it is not always possible to avoid thereby dangers which threaten the crews and passengers." It was afterwards explained, semi-officially, that submarines, owing to their limitations, could not observe the procedure consecrated by age and that none of the usual formalities for the protection of life and neutral property could be observed.

After the sinking of the *Lusitania* and the murder of 1,198 persons travelling in her (including over 100 American citizens) the United States Government in its Note of

May 15th discussed the doctrine of the freedom of the seas and then proceeded to sum up the case against Germany :

It does not understand the Imperial German Government to question those rights, but assumes, on the contrary, that the Imperial Government accepts as a matter of course the rule that the lives of non-combatants, whether they be of neutral citizenship or citizens of the nations at war, cannot lawfully or right-fully be put in jeopardy by the capture or destruction of unarmed merchantmen, and recognises also, as all other nations do, the obligation to take the usual precautions of visit and search to ascertain whether a suspected merchantman is in fact of belligerent nationality or is in fact carrying contraband under a neutral flag.

The Government of the United States desires to call the attention of the Imperial German Government, with the utmost earnestness, to the fact that the objection to their present method of attack against the trade of their enemies lies in the practical impossibility of employing submarines in the destruction of commerce without disregarding those rules of fairness, reason, justice, and humanity which all modern opinion regards as imperative. It is practically impossible for officers of submarines to visit a merchantman at sea and examine her papers and cargo. It is practically impossible for them to make a prize of her, and if they cannot put a prize crew on board, they cannot sink her, without leaving her crew and all on board her to the mercy of the sea in her small boats.

These facts, it is understood, the Imperial German Government frankly admits. We are informed that, in the instances of which we have spoken, time enough for even that poor measure of safety was not given, and in the last two of the cases cited, not so much as a warning was received. Manifestly, submarines cannot be used against merchantmen, as the last few weeks have shown, without an inevitable violation of many sacred principles of justice and humanity.*

When these statements were made the United States Government apparently understood that submarines did not, and could not, carry guns. In subsequent months, however, the Germans sent to sea submarines which not only can, but do carry guns—as instance the bombardment of Whitehaven. The latest German craft which have been employed in the war on British merchant shipping have, like the *Emden*,

* The "concession" by Germany, in promising to give "liners" warning, leaves the enemy still under the charge of outlawry and murder, for merchant sailors and fishermen are entitled to as much consideration as the travellers in liners.

carried guns as well as torpedoes, while possessing the additional defensive power residing in their ability to dive beneath the water to escape from pursuit or to evade attack, as the *Emden* could not do. The *Emden* was of 3,592 tons, with a speed of 24 knots; she was provided with two submerged torpedo-tubes and armed with 10 4·1-in. guns; the latest German submarines displace 1,200 tons and more, and have a speed of 20 knots; they compensate for a reduction in the number of their guns by an increase in the torpedo equipment. They have fewer guns and more torpedo-tubes than the *Emden*. That is purely a matter of German convenience, and not of necessity. Dispatching such new, armed and swift, though small, cruisers on the highways of commerce—cruisers which can travel on or under the water at will—the Germans had the effrontery to claim the right to set aside all the laws of God and man, and to commit murder and outrage on the high seas.

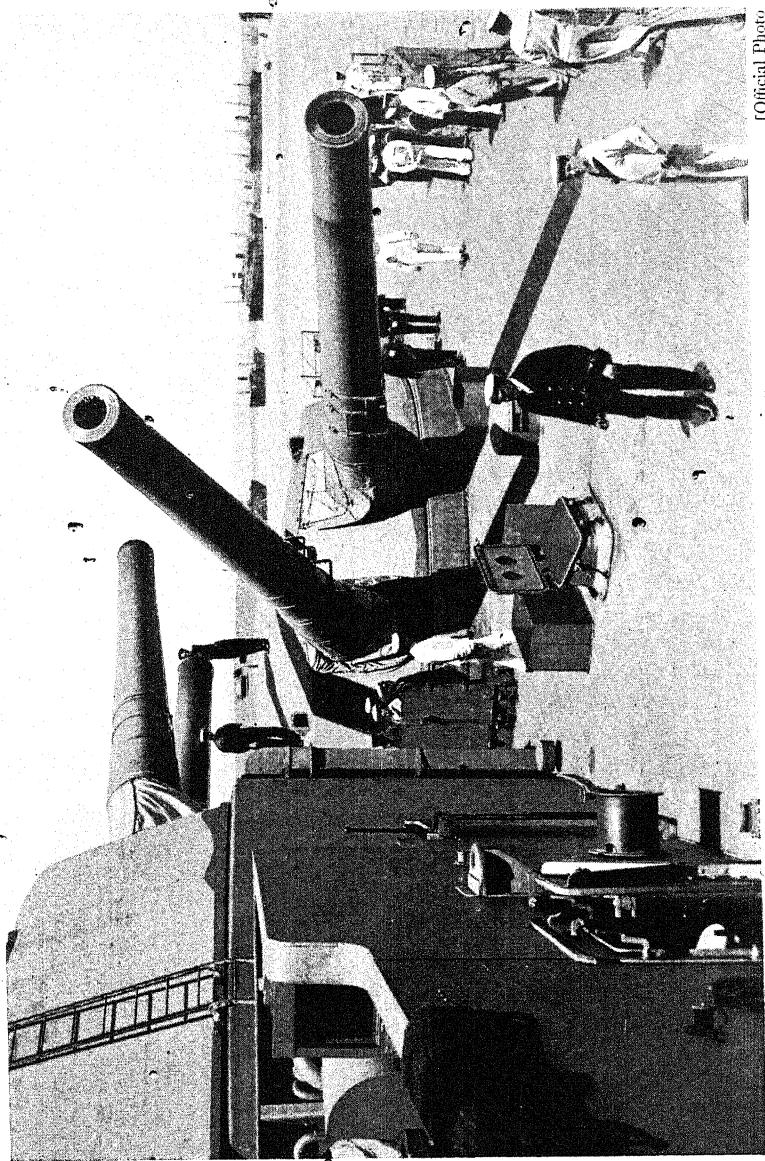
With men-of-war larger than some of the ships classed by the Germans as cruisers, and possessing the advantage of being able to dive in order to evade attack, "precedents," as the present writer pointed out in the *Daily Telegraph* of August 28th, "are being established which may affect all the conditions in which non-combatants and merchant sailors have hitherto been able to travel by sea. The submersible man-of-war will probably develop in power and grow in size. The present generation may live to see armoured vessels of comparatively large displacement—battleships, in fact—able, partially at least, to submerge themselves at will. According to the reasoning of the 'frightful' Germans, such vessels will be entitled to destroy everything they come across, enemy or neutral—for they have sunk, in proportion to the number of ships encountered, more neutral than Allied ships—consigning passengers and crews of the merchantmen to death by drowning."

Against outlawry more conspicuous for its inhumanity and its illegality than any recorded in modern times, British sea-power has triumphed. It may be admitted that the British Navy was caught unprepared, but in process of time an effective defensive-offensive, as German writers have confessed, was created. As was inevitable in the circumstances, our merchant Navy suffered losses, and over 2,000 non-combatants were sent to their graves

by acts as murderous as any for which criminals have ever been hanged. But swiftly, in view of all the difficulties, to quote the statement made by the Earl of Selborne, a Cabinet Minister as well as an ex-First Lord of the Admiralty, the Navy "got the German submarine menace well in hand." The Admiralty has shown a wise reticence as to the means employed against these underwater craft and the number destroyed, while admitting that the enemy's losses, even by the middle of August, had been "important." In other words, confronted with a new, unexpected, illegal, and inhuman type of warfare, British sea-power triumphed once more.

In glancing back over the months of warfare at sea, marked by many outstanding successes and some minor disappointments, the British people and the peoples living in the far-distant Dominions have manifold grounds for thankfulness. The Empire floats on the Navy, and, in a trial of strength against the second greatest Fleet in the world, British officers and men have not only not failed, but have achieved a series of triumphs unparalleled in the history of naval warfare. We have once more been reminded that "it is upon the Navy that, under the good providence of God, the wealth, prosperity, and peace of these Islands and of the Empire do mainly depend." Mr. Arnold White once remarked that "five times in the history of England the British Navy has stood between the would-be master of Europe and the attainment of his ambition. Charlemagne, Charles V, Philip II of Spain, Louis XIV of France, and Napoleon—all aspired to universal dominion. Each of these sovereigns in turn was checked in his soaring plans by British sea-power." Under our very eyes the British Fleet is once more fulfilling its historic mission, and when the inevitable victory of the Allies has been won the world will pay its tribute to the British Fleet as the predominant element which encompassed so great a salvation.

ARCHIBALD HURD.



AFT 15-IN. GUNS OF H.M.S. "QUEEN ELIZABETH"

[Official Photo

CHAPTER II.

The Influence of the British Navy upon the Course of the War.

IN August 1914 Great Britain had not known naval war for a hundred years; but in the preceding century there had been six great wars in which the Navy played a dominant part. All entailed expeditions acting over sea. In all we became involved with France, and they therefore took the form of contests for commercial supremacy and overseas possessions. All taught national lessons of the greatest value, and some presented points of striking resemblance to the mighty struggle now proceeding.

A voluminous literature, entangled in controversy, is growing up with respect to the causes of the present European conflict, but the main factors are beyond all question. They are psychological and material, and they acted and reacted upon each other. We can clearly trace, in their own literature, the gradual obsession of a great and formidable people, steadily increasing under the deliberate inspiration of the dynasty and the governing class, and fostered by racial characteristics and by the persistent inculcation of historical and intellectual claims to world dominion. Such a monstrous growth could lead only to a great catastrophe which nothing but a complete change in the outlook of the German nation could have averted. For this deadly portent there is, I think, only one historical precedent, which is not strictly analogous. The wild storm arising from the French Revolution was also due to the obsession of a great people brought about by a propaganda which powerfully appealed to the masses. France had invented a new system which was to give liberty, equality, and fraternity to mankind, promising a blissful era of happiness and prosperity to the world. This system must

be offered to the oppressed nations, and if not accepted, it must be forced upon them by arms for their own highest good. Ideas which had their noble and generous side were quickly degraded into a sordid struggle for power and personal gain among ignoble factions. The Revolution perished in a sea of blood, and out of the wreckage emerged a man who gave a new impulse to the giant forces which had been engendered, and whose ambitions have been equalled only by those of the Prussian dynasty.

But there is one striking point of difference in the two cases. The people of France in 1779 were very poor and suffering from gross misgovernment and oppression. The German people last year were on the flood-tide of commercial and industrial prosperity. They were carving out their fortunes and secretly acquiring financial power in all lands. Germany was growing rapidly richer, and her influence was spreading far and wide. Writers and speakers were never tired of bidding us to copy everything German and of contrasting German energy and brains with our own apathy and dull perception.

The altruistic conception of spreading German Kultur for the world's good was closely bound up with the insensate desire for power and for material advantage to be won by conquest. This the professors had laboured to inculcate. It was proclaimed as intolerable that, in Europe, any people of German race should live under any rule except that of Prussia, and three wars were deliberately provoked to enforce the principle, while more in this direction remained to be accomplished. Germany must have her place in the sun, whatever that may mean, and territory overseas must be taken by force from other nations which happened to possess and were regarded as too weak to defend it. Thus arose an insistent demand for sea power, and the argument ran, as I tried to express it in the *Nineteenth Century* nearly sixteen years ago:

Great Britain owes her commercial supremacy to expansion across the seas. That expansion was in the first instance the direct gift of sea power, the result of triumphantly successful naval warfare. It has since been maintained and developed under the ægis of the flag; in other words, by the naval prestige won in great wars. Let us, therefore, annex far and wide and build up great fleets.

This, the material argument, has flaws, as I pointed out, but it served its purpose in inflaming naval ambitions, and in the case of Germany, whose commerce was rapidly increasing and whose colonial possessions were undeveloped, it was open to grave doubts; and it was rendered attractive by assertions that Britain, the great robber State, who owed her expansion to opportunity, treachery, and violence, was rapidly approaching decrepitude. As Treitschke, pointing to our Empire, was careful to instruct his countrymen:

A thing that is wholly a sham cannot, in this Universe of ours, last for ever. It may endure for a day, but its doom is certain; there is no room for it in a world governed by valour, by the Will to Power.

Hallucinations of this kind were, peculiarly dangerous when they permeated a people imbued with inherited militarism and drilled into obedience to a powerful central Government. We did not at first realise that the unification of Germany which Bismarck accomplished by successful war would, sooner or later, threaten the liberties of Europe and our own national existence. Meanwhile, German armaments were steadily piled up, and preparation for war by sea and land was brought to a standard of perfection never before attained. As a German authority proclaimed: "Huge armaments are in themselves desirable. They are the most necessary preconditions of national health." It was only when rapid successive additions, backed by a strong Navy League with official support, were made to the German Fleet that doubts and misgivings arose in this country. The German people were being taught some at least of the lessons of the great naval wars of the past, which too many British people had forgotten. They were learning that their vaulting ambitions could be realised only by the agency of sea power, and that between Germany and the world dominion which she claimed as her right lay the Island State, which had shattered the projects of Napoleon and was—they were told—now far sunk in national decay.

With the knowledge that we now possess, it is impossible not to believe that the decision of Germany to force on a European War last year saved the British Empire from greater dangers in the near future. We remember the state of weakness to which the Navy had been reduced in the

eighties, and the strenuous efforts which led to the Naval Defence Act of 1889 and have been found necessary ever since. We do not forget the activities of the Little Navy party and of the pacifists within six months of the cataclysm. We cannot know whether reaction might not have supervened if Germany had waited and had trusted to the secret methods of manipulating political opinion which she so well understands.

On August 4th last year, the Navy was in a position of relative strength never realised at the beginning of any of the great wars of the past, and stood ready for immediate action as it did not even after the rupture in 1803 of the brief peace of Amiens. Of the forces which were to champion ~~the liberties~~ of Europe, not one was so well prepared. And the reason was that the intelligence of our people at home and overseas had been awakened to a sense of their primary Imperial need by an educative process in which the Navy League played a notable part. Thus we possessed a marked initial advantage, to which another was added. A great mobilisation of the Fleet had taken place in July, and the crews had not been dispersed. General von Bernhardt had hinted at a "plan" of anticipating the enemy "by a sudden attack" by which "the English Fleet might be badly damaged at the outset of the real hostilities," and the Germans must have been well aware that to begin war when that Fleet was mobilised was not good policy. On the other hand, delay might have led to an arrangement between Russia and Austria, which we now know to have been possible, if not probable, and delay, after so plain a warning, must have led to the strengthening of the many weak points in the armour of the Entente Powers. This would not have suited German designs, and the ultimatums to Russia, France, and Belgium destroyed the last hopes of peace. Whether the Kaiser and his advisers fully realised what the intervention of Great Britain must entail, we do not know; but the clumsy and dishonourable proposals made to Sir E. Grey clearly indicate alike the delusions under which they laboured and their frantic desire for our neutrality until France and Russia had been crushed.

While, from our naval point of view, the date at which Germany, armed to the teeth and equipped with a plan of operations elaborated to the last detail, decided to plunge Europe in war, was propitious, the tasks instantly thrown

upon the British Navy were as great as any which it had been called upon to face in all its long history. This is not the time to show how these tasks have been accomplished ; but I will attempt to indicate their nature and the dominating influence which the Navy has brought to bear upon the course of the war.

Everything which the so-called Blue Water School claimed for naval force has been more than justified, and it has been proved, as some of us had insisted, that naval force could be asserted far more rapidly and with far more wide-reaching effects than were possible in sailing days. That is the great change since the old naval wars. Sea power is now infinitely more effective than when Thucydides put the phrase into the mouth of Pericles, and far more effective than even Nelson, its greatest exponent, could have imagined. We were sometimes told that it was the function of the Army to set the Navy free for distant operations. We see again, as history could teach us, but now on a scale never before approached, that it was the Navy that enabled a great new Army to be created for operations over sea, and that the very first and, as it proved, vitally important achievement of the Navy was to set free almost our whole regular Army at home to be sent at the outset of war to the assistance of our Allies, and to safeguard its passage to France. What this meant, the future historian will know how to explain.

As in the old naval wars, the primary strategic requirement, on which all else depended, was to control the enemy's battle-fleet, and the method adopted was essentially that of St. Vincent. Brest, the great naval port of France, was, in the eighteenth and early nineteenth centuries, the main point of anxiety in Western waters. It was the habit of Howe, followed by Bridport, to make Spithead the rendezvous of the blockading fleet and to keep most of it in port during the winter months, when the latter lived on shore. This plan did not succeed. The Irish Expeditionary Force in 1796, and the great fleet under Bruix in 1799, escaped the blockade. St. Vincent insisted on a rendezvous near Ushant and allowed his ships to go into port only when it was absolutely necessary. For the British Navy in August 1914, the mouths of the Ems, the Weser, and the Elbe, spread over a seaboard of 75 miles, and the outlet of the Skager Rack, about 250 miles to the north, became the

objects of blockade, and although no near rendezvous and no unvaried rendezvous was possible, the principles of St. Vincent and of Nelson off Toulon later have been followed. Steam, speed, and wireless communication have vastly extended the range of a naval blockade, and the Grand Fleet under Sir John Jellicoe rode out the winter gales in northern seas, controlled the enemy's fleet more effectively than was possible in the old days, and has carried out dashing and successful raids into his home waters. The German Fleet has so far dared nothing, except two cruiser raids of which the first, by mere chance of weather, escaped, and the second was brought to action when running for life with the loss of at least one ship and much damage to two others.

Do we all realise, do even our gallant Allies fully realise the tremendous influence which the storm-beaten ships in the North Sea have exercised upon the war? Our whole Expeditionary Force was enabled to join the French Army at a most critical moment. Thanks to the protection of the Navy, it has since been reinforced to large dimensions and kept perfectly supplied. It has displayed endurance in defence and gallantry in attack never exceeded in our brilliant military annals; it has borne its full share in long holding the enemy at bay, and it has lately taken the offensive with important results. Meanwhile, the greatest army we have ever had, comprising the pick of the manhood of Britain, is being trained into efficiency, and has already furnished large contingents for the front. Because we have kept the sea, the country has been secure against invasion and our industries have proceeded unhindered, while our output of material of war has largely increased and can be made to fulfil the requirements of the war if our people understand that we are fighting for existence. We owe it to the Grand Fleet that our finances have borne the tremendous strain of war, that our credit has been wonderfully maintained, and that Italy is fighting gallantly on our side. Even in the Baltic, where the Germans have a large naval preponderance, they have achieved nothing, and their attempts on Riga have so far failed for sufficient reasons. Beginning on October 17th last year, Anglo-French squadrons have at intervals heavily bombarded the Belgian coastline in conditions which, so we were assured, submarines would render impossible. Naval force, thus applied, has provided valuable support to the left of the Allied line

in Flanders, and has caused much damage to the enemy's submarine base and workshops.

All the varied and far-reaching operations in distant waters, including the attack on the Dardanelles; our unbroken Imperial communications, enabling India and the Great Dominions to send their gallant sons in thousands under safe convoy to uphold the Imperial cause, and securing their commerce and our food supply; the destruction of the sea-borne trade of Germany, entailing stringency which is steadily increasing; and the capture, accomplished or impending, of all her Colonial possessions—all this we owe to the unseen Fleet controlling the North Sea, upon which the control of the Adriatic, now assumed by Italy, ultimately rests. Never in all history has there been a manifestation of sea power on so gigantic a scale.

It was certain that no great naval action would be fought immediately after the outbreak of war, and whether the two main fleets will meet depends upon psychological and political, rather than upon naval considerations. We know only that crews, however brave, locked up for months in harbour, can be no match for British sailors who eagerly await the chance of battle hardened by exposure to the winter storms and inured to the life of the sea.

Reading frequently, as we do, of the loss of ships near our coast from torpedoes or mines, while the Grand Fleet is shrouded in mystery, it is natural that the public view of naval operations should be distorted. Such losses, continuing during many years, were familiar to our forefathers. From 1793 onwards, the war against commerce was relentlessly waged and became, after our great victories at sea, the dominating naval object of our opponents. The methods adopted resembled those of to-day. In distant seas, small squadrons operated on great trade routes and gave support to detached cruisers and privateers, precisely as the force of Admiral von Spee was able to do until caught. In home waters, swarms of smaller craft, privateers, and even fishing boats played the part of the submarines, making almost daily captures, often in sight of the coast, and inflicting greater proportional damage to our trade than we are now experiencing. Meanwhile, enemy commerce was swept from the seas by the British Navy, and in 1798 the Directory reported that "not a single merchant ship sailed under the French flag." We know that later Napoleon was forced

by the British Navy, as he himself said, to attempt "to conquer the sea by the land," and was driven into the Continental system which brought him to ruin. Some day it will be possible to make an interesting comparative study of the warfare against commerce in 1914-15, and between 1793 and 1814, and of the effect upon neutrals of the German proclamations and of our own naval procedure. I will only say now that, although the Berlin Decree of 1806 declared the British Islands to be blockaded at a time when, in Admiral Mahan's words, "the Emperor could not keep a ship at sea except as a fugitive," the gross violation of all international law implied in the deliberate sinking of captured ships and cargoes, and the inhuman practice of destroying without warning and regardless of life all ships of neutrals and belligerents found within a defined area, did not disgrace the proceedings of the old wars. And further, while our own Orders in Council of 1806 placed the coast from the mouth of the Elbe to Brest in a state of blockade, they were not so mild as the Orders of March last, tardily issued, which show greater tenderness to the interest of neutrals than was manifested by the Northern States in the American Civil War.

When the naval history of 1914-16 comes to be written, it will have to be said that, though faced with barbaric disregard of the common dictates of humanity, we did not use our greatest weapon to the full extent. The stoppage of cotton, in August 1914, would have sharply curtailed the duration of the war, and saved vast numbers of lives.

Viewing the operations of the British Navy in distant waters since the war began, the energy displayed and the completeness of the results appear startling. In less than eight months sea power accomplished more than was achieved until six years after the decisive victory of Trafalgar. The German preparations for the attack on commerce were elaborate and cleverly conceived. They could not be successful in the long run without the naval support which the Grand Fleet denied. They caused us moderate losses not all necessary, and, with the assistance of our Allies and the young navies of the Dominions, they were quickly brought to an end. We have made mistakes, as must happen, but our one defeat off Coronel was caused by an action against a greatly superior force which, instead of being avoided, as was possible, was courted in accordance with British traditions. In the one single-ship action on equal terms, that

between the *Carmania* and the *Cap Trafalgar*, British seamanship secured victory.

The difficult and costly operations in the Gallipoli Peninsula, closely resembling those of the Crimean War, from which we might have learned lessons, were rendered possible only by our full control of the sea. In certain conditions, adequate naval force may be able to silence an enemy's guns on shore; but the positions of the Turco-German defences were peculiarly unfavourable to naval attack, and the attempt to force the passage of the Dardanelles was foredoomed to failure. In the landing of the Allied forces two months later—one of the finest and most desperate feats of arms ever accomplished—the support provided by their squadrons was indispensable, and the subsequent supplies and reinforcements were the gifts of sea power based upon the North Sea. But the Navy was able to do more than this. Submarines, most gallantly handled, passed through the dense mine-fields of the Narrows, attacked the Turkish communications in the Marmora with marked success, and carried panic to Constantinople. If it had been possible at the same time definitely to prevent all coasting movements in the Black Sea, the Gallipoli defences might have fallen. That the Germans should have been forced to corrupt Bulgaria and to undertake a fresh campaign in the Balkan Peninsula is a striking instance of the influence of the sea on land operations.

As in the Levant, so in the Persian Gulf, the military operations not only rested upon sea power, but received essential, direct assistance from the Navy. The unbroken success which has attended this very important subsidiary campaign was largely due to the work of our seamen far up the waterways of the Tigris and Euphrates.

At the beginning of the war, the submarine was an unknown force, greatly over-rated in some quarters and perhaps under-rated in others. We had not made sufficient preparations for the only effective defence against it—attack—and for a time the special precautions imposed upon warships at sea seem to have been imperfectly realised. Our losses of ships, both in the North Sea and the Levant, were therefore severe and not all inevitable. The German declaration of indiscriminate piracy within a defined area, which was promulgated on February 18th, imposed a heavy responsibility upon the Navy. Vigorous measures were

taken and steadily developed with notable results which we are not permitted to know, although the enemy becomes quickly aware of every lost submarine and has carefully concealed his casualties. From the statements of Ministers, however, it is clear that the total losses have been heavy. The submarine campaign has plainly failed. It has resulted in the murder of many helpless non-combatants and in pecuniary sacrifices; but it has not in the slightest degree benefited the enemy or affected the course of the war. On the other hand, it has inflicted an indelible stigma on the German Navy, and has created strained relations with the United States and resentment on the part of other neutrals. It will not be forgotten, and in the long run it will prove to have rendered grave disservice to German interests. Meanwhile, our own submarines have utilised their opportunities with the utmost skill and daring, and have been able to give valuable and needed assistance to the Russian Fleet in the Baltic.

Sea power does not begin and end with fighting ships, and one of the most striking features of the war is the employment of our general maritime resources and the heavy demands which they have proved able to meet. Very large numbers of vessels of all sorts have been brought into the service of the State for work of the most varied kinds. The seafaring population has been drawn upon for dangerous duties and has shown true heroism. Our merchant captains and crews, who, we were bidden to believe, would decline to go to sea if one or two vessels were sunk by submarines, and our fishermen, who have suffered heavily, evince no dread of the German pirates, and continue to pursue their callings with admirable courage and resourcefulness. Our trade has recovered from the first shock of war, and the instincts of the sea—our great inheritance—have asserted themselves and are powerfully assisting the national cause in these times of stress and anxiety.

But above all stands the Royal Navy, guarding, directing, and inspiring, brought again to the supreme test of war after a hundred years, and abundantly justifying our high hopes. Night and day, in all seas and in all weather, it carries on its infinitely varied duties unseen and unheralded, performing daily acts of skill and gallantry of which we know nothing. When its immense activities come to be worthily described, the nation will understand that, alike on the sea

and in the air, our seamen have shown all the finest qualities of their forefathers and have been able to turn to full account all that modern, scientific progress has conferred upon sea power. In one sense, perhaps, they have done their work too well, because it is due to what His Majesty the King so well described as the "sure shield" of the Navy that our people, secure in their homes and occupations, have not all realised, as they must be made to do, that our whole strength is required in the great cause for which we are fighting and that the liberties of Europe and our own depend upon the supreme effort which is demanded of our patriotism, fortitude, and endurance. Our masses at home must be brought to see that our gallant Allies are staking their all upon this war and are steadfastly facing ills that we are spared, and that a speedy end means the saving of tens of thousands of precious lives and the reduction of national burdens in the future.

There can only be one issue to this war, and when the black clouds of falsehood, which are being thrown up with volcanic energy by the exponents of advanced civilisation, are dissipated, truth will prevail. History will record that, just as the Navy of St. Vincent and Nelson played a dominant part in saving Europe from despotism and laying the foundations of our free Empire, so the Navy of our day was the ultimate and the indispensable support of the mighty forces that wanton German aggression and perfidy called into action, and was able to safeguard the Empire in its time of greatest peril. And the Navy League in the years to come will be able to reflect with pride and satisfaction that it persistently laboured to keep alive the spirit of the sea and to build up the splendid Navy which, in God's hands, has again, after a hundred years, wielded "the tremendous weapon of sea power" in the cause of human liberty and of the honour and security of our Sovereign and his Dominions.

SYDENHAM OF COMBE.

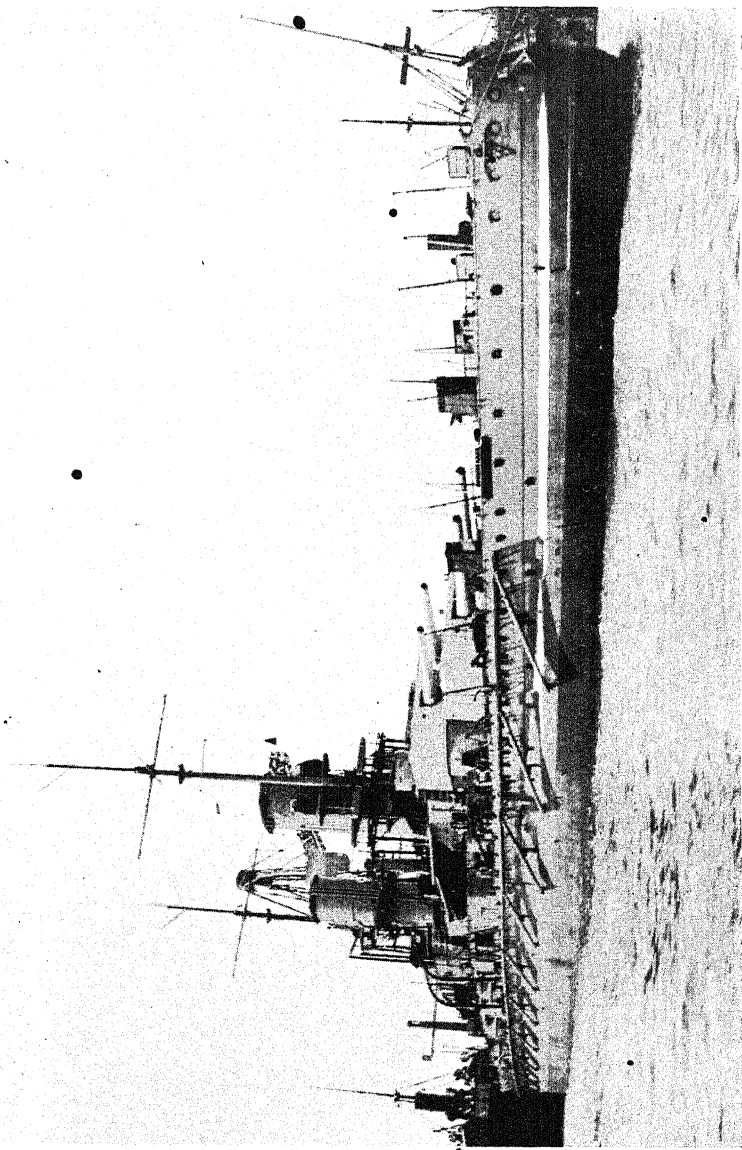
CHAPTER III.

Foreign Navies and the War.

AUGUST 1914 found almost all the small States which possess a seaboard provided with some kind of a Navy. Many of them had even aspired to the possession of *Dreadnoughts*. Vessels of this class were building for Turkey, Greece, Chile, and the Argentine, while Brazil already possessed the *Minas Geraes* and *Sao Paulo*, and Spain had already two ships of quasi-*Dreadnought* type completed. There had been, for some years, constant rumours that Holland and Portugal intended to enter the costly competition, but no definite steps had been taken.

Other States, such as the Scandinavian kingdoms, were frankly content to rely on vessels of the coast-defence type and comparatively strong flotillas of torpedo-craft. In the category of neutral States at the outbreak of war, stood the United States with the third Navy in the world and great shipbuilding resources, and Italy, whose Navy ranked sixth.

Whether all these States had ever really thought out the functions which their Navies might be expected to perform is doubtful. So far as Greece and Turkey are concerned, of course their shipbuilding programmes and their purchases from other countries were dictated by mutual rivalry. Their Navies were undisguisedly designed for use against each other. The same may be said in a modified degree about the fleets of the South American Republics. Possibly they had remote visions of a union to resist in combination the naval attack of a single great Power. But, in the main, their reason for desiring naval strength was in order that they might possess a backing for their diplomacy in the complicated tangle of jealousies and ambitions which make up the politics of South America. Holland, again, has an Oversea Empire to defend, and felt the need



GERMAN BATTLESHIP "GROSSER KURFÜRST" (COMPLETING)

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of ships for service in the East. But, apart from this, she and the States of Scandinavia, having as neighbours some of the greatest maritime nations of the world, pursued a naval policy the purport and usefulness of which, very little apparent beforehand, has been shown by the events of the war to be *nil*. So, too, in the case of Spain and Portugal, States which are hardly likely to be embroiled single-handed with Powers of their own fighting weight.

Now, of the minor Powers which aspired to the possession of *Dreadnoughts*, only Spain was in a position to build them at home, and she only by the aid of British firms which took in hand the organisation of her dockyards. All others had to order them from abroad, and Great Britain, the United States, and Germany were the only possible sources of supply. Italy has, of course, built many warships of lesser size for foreign Powers, and could have undertaken the construction of *Dreadnoughts* had her resources been at liberty. But, owing to the rivalry with Austria, her nominal Ally, she was fully occupied in building them for herself. A situation then arose which had for some years been clearly foreseen. For some months before the war broke out, a keen competition went on for the ships which were building for Brazil, Chile, and the Argentine. The Turks bought the Brazilian battleship *Rio de Janeiro* before she was completed, renaming her the *Birindji Osman*. The Greeks tried hard to follow suit, making an offer of an almost fabulous amount, first for the two Chilean battleships, *Almirante Latorre* and *Almirante Cochrane*, and then for the Argentine vessels, *Moreno* and *Rivadavia*, building in the United States. Precisely the same thing had gone on, it will be remembered, before the Russo-Japanese war, when we bought the *Triumph* and *Swiftsure* (ex *Constitucion* and *Libertad*) and the Japanese the *Kasuga* and *Nisshin*, which were building for the Argentine in Italy. How much may have been foreseen of the coming trouble at this time, I do not know. But there are reasons for thinking that an agreement was arrived at between this country and the United States to prevent the sale of any of these ships to foreign Powers. The Greeks, however, managed to purchase the American pre-*Dreadnoughts*, *Mississippi* and *Idaho*, and, what is more, to obtain delivery of them.

At the outbreak of war the vessels building for foreign States in belligerent countries were, for the most part,

if not altogether, commandeered. We at once took over the Turkish ships *Reshad V* and *Birindji Osman*, which are now in our Navy as the *Erin* and *Agincourt*. There is the best reason to believe that these vessels had already been disposed of by the Turks to the Germans. Later, we acquired the Chilian *Almirante Latorre*, renaming her the *Canada*. The ultimate fate of the *Cochrane* is still a matter of doubt. Her acquisition by Great Britain has never been announced. In addition, we took the three river monitors building for Brazil, which have done such useful work off the Belgian coast, and the flotilla leaders now named *Broke*, *Faulknor*, *Botha*, and *Tipperary*. Germany, on the other hand, is believed to have taken over the Greek battle-cruiser, *Salamis*.

These transactions show the futility of the attempt on the part of small Powers to strengthen themselves except by the will of their stronger neighbours, so long as they are compelled to go to those neighbours for the construction of their ships. Outside the eight Powers which are, more or less, in the first rank at sea, all but one of which are, at present, engaged in hostilities, there are only six vessels, built or building, which can properly be described as *Dreadnought* ships. Spain possesses two, Brazil two, and the Argentine two. Our own Fleet has been considerably strengthened by those we have been able to buy; but we may think ourselves lucky that the war came just in time to prevent the two Turkish ships from passing into the hands of their putative owners. "*Dreadnoughts* for sale or hire" in the hands of minor States are, as I pointed out in an article published in the *Nineteenth Century* in 1908, no inconsiderable menace to the country which lives by sea power, if naval strength between her and her possible enemies should be fairly equally balanced. We have come out all right this time. But the question is one which will have to be gravely considered after the war, and it would be for the benefit of the peace of the world if the United States would arrive at some agreement with us to regulate the building and sale of warships.

As matters have turned out, however, the strongest Power has been made stronger, and the small Powers have received from the events of the war a lesson in the inefficacy of anything except supremacy at sea to protect the maritime interests of neutrals.

The Navy of the United States (to take the most important case first) is the third strongest in the world. Yet American neutrality and American interests have been flouted again and again. I need not refer in detail to the sinking of the *William P. Frye*, the *Falaba*, *Lusitania*, *Arabic*, *Hesperian*, and many other vessels which were either American-owned or carried American passengers or goods. The history of these events, of the protests which followed them, and the dilatory negotiations, is perfectly well known. It would be too much to say that the United States Government has been powerless to obtain redress, but it is not too much to say that, under the circumstances, the Americans could obtain no redress by naval action. The addition of their sea power to ours, when German trade is swept from the ocean and the German war Navy shut up in its ports, could not affect the situation. Nor must the other side be overlooked. Incidents like the seizure of the *Dacia* by the French and the stopping and searching of American vessels by ourselves, followed, from time to time, by the requisitioning of the cargo, the extension of the doctrine of continuous voyage, and so forth, are intensely galling to a neutral Power, no matter how justifiable they may be. But for the United States to have taken steps to hamper us in our conduct of the maritime war would have been to give assistance to the Power which has outraged the conscience of all right-thinking people. We owe an immense debt to the sympathy and forbearance of the American people. But that very forbearance shows the impotence even of a strong neutral to uphold its maritime interests in a war like the present unless it is prepared to abandon its neutrality.

It is an interesting speculation whether, if Chile had had possession of the *Almirante Cochrane* and *Almirante Latorre*, she could have prevented or resented the violations of her neutrality by von Spee's squadron, and, later, by the *Dresden*. But it is evident that her Navy as it stands was quite inadequate to the task. The Germans played fast-and-loose with Chilean neutrality as they pleased, and, eventually, we were compelled to take the law into our own hands and defend the neutrality of Chili by violating it, an action for which we offered due apology, which was very graciously received, not, one would conjecture, without a sigh of relief. I do not recall any similar outrages offered

to the other Republics of South America ; but if none were committed, it was only because no opportunity offered or necessity arose, not from any scruple on the part of the Germans or any power on the part of the States in question to enforce respect.

In Europe, Holland and the Scandinavian countries have seen their ships sunk by torpedo or bombed by aircraft, and have been powerless to avenge the wrong done to them. Even Sweden, the one country in Europe—outside the Balkans—where some measure of sympathy for Germany has been supposed to exist, has been treated like the others. Swedish merchantmen have been sunk and Swedish territorial waters invaded and used as bases for the operations of the German ships in the Baltic. Norway has suffered the capture of a ship carrying the mails and the seizure and rifling of the mail-bags. Moreover, the British auxiliary cruiser, *India*, was sunk in her territorial waters. How far the violation of Danish neutrality has gone, it would be very difficult to say. But, of course, the most flagrant outrage was that committed when *Er3*, stranded in the Sound, was attacked by German torpedo-boats, which first discharged a torpedo at her and then proceeded to fire on her crew when they were struggling in the water. The seamen of the Danish vessels in the vicinity behaved with a splendid heroism on this occasion, and the Danish Government with the greatest spirit. We have every cause to be grateful to both. The Danes have put us under a debt of obligation which I trust we shall find means to repay at the end of the war. They have risked a great deal, for it is idle to suppose that their Navy could defend them against a German attack on the shores of Zealand, or their Army from a German invasion of Jutland.

The moral of the war, so far as European neutrals are concerned, appears to be that, just as, in the artilleryman's proverb, "one gun is no gun," so a small Navy is no Navy. It must be quite evident to the Admiralties of the small States that the day of vessels like the *Pedr Skram* and the *Zeven Provinciën* has long gone by, if, indeed, it ever existed, save as a theory. If neutrals desire to uphold their neutrality, they must have a Navy so strong that its weight thrown into the scale will materially affect the ultimate prospects of one or other of the belligerents, or an Army

capable of exercising a like influence. German cruisers dared not overtly violate the neutrality of the harbours of the United States because they knew that the United States had the power to resent such action by stronger force. Two auxiliary cruisers threatened to do so, but, after much bluff, succumbed without a struggle and were interned. But when it came to the submarine war on commerce, even the United States found themselves pretty well powerless, for reasons stated above, to bring any pressure but moral force to bear on the Germans. Moral force, however, combined with the "formidable losses" which we have inflicted on the enemy submarines, has at length produced an effect—how great time alone will tell. It is interesting to trace the directions in which that moral force has acted. But the discussion would lead us too far afield. Its effect has been great to a degree which is cheering to those who believe in its power.

Now, what effect is it likely that the lessons of the naval war will have on the Navies of the States which are now neutral as regards their future development? For this purpose we may include Japan among neutral States. For the present, the tendency is, of course, and naturally, to mark time. Only the United States and Japan are self-sufficient in the matter of the construction of heavy ships. The lesser States, although, in the majority of cases, they construct the hulls in their own dockyards, are dependent on the great armament firms in belligerent countries for armour-plate, guns, gun-mountings, and so forth. Of course, no supplies of these will be available until the conclusion of the war, and for some time afterwards. But a more important reason for delay is the present uncertainty as to what the war has really taught. Is the *Dreadnought* still master of the sea, or has the submarine wrested her supremacy from her? Or, at any rate, has the submarine proved herself so formidable that nations which cannot maintain great fleets of *Dreadnoughts* may safely rest their defence on under-water craft? These are questions which each nation will answer in its own way, according to its geographical position and the amount of its resources. The answer of the United States will probably be different from that of Denmark, for instance.

To deal with the *United States* first. Cross-currents of opinion have been very evident in that country. At present,

it is not possible to say more than that it is, apparently, common ground to all parties that the events of the last eighteen months demand that there should be a large increase of naval strength. This opinion, however, may be modified if the Allies win a complete victory. If they do not, the American people will regard themselves as the last barrier of civilisation. Mr. Daniel, whatever his eccentricities may be with regard to the interior economy of the Navy, is a sturdy advocate of naval strength. He has drawn up an ambitious programme, to be spread over a term of five years, the basis of which is the attainment of a standard of forty-eight *Dreadnoughts*. It is interesting to note that one of those now about to be ordered will be electrically driven. For a time, however, the success of the submarine—or perhaps one should say, rather, its apparent success, diverted the attention of the Americans to this weapon, and there was an agitation in favour of abandoning the battleship programme and substituting for it the construction of an immense number of under-water craft, of great size and radius of action. The recent visit of an American journalist to the British Fleet, and his description of the silent influence exercised by the battle-squadrons, have, however, brought about a juster appreciation of the permanent elements of sea power, and the pendulum has swung back in favour of the construction of heavy ships, particularly of battle-cruisers. There is a project for building six of these, of a displacement of 50,000 tons, to be armed with twelve 15-in. guns. Nothing, however, has been settled as to any new departure, and the present programme of two battleships of 32,000 tons, six destroyers, and eight submarines presumably stands for this year. The *Pennsylvania* and *Arizona* are completed, and progress is being made with the *California*, *Idaho*, and *Mississippi*. The Americans suffered a grievous loss early in the year by the death of Admiral Mahan, whose guidance at the present time would have been invaluable to them.

There is no sign that any new departure in naval policy is contemplated by *Japan*. That Power employed only her older ships in the siege and blockade of Tsing-tao, and got off lightly with the loss of an old cruiser, the *Takachiho*, and some minor craft. The Japanese battle-cruisers and armoured cruisers did good work in rounding up von Spee,

in the course of which the *Asama* went ashore. Two new battleships of the *Fuso* class were laid down in 1914, but, so far as is known, there has been no further extension of programme. The submarine craze has not influenced the Japanese, and their flotilla of these vessels remains small.

Nothing definite can be said about the naval programme of *Holland*, which, in any case, is not likely to be taken in hand until after the war. The report that the Dutch Government contemplates the construction of *Dreadnoughts* has been revived. The purpose, however, is believed to be to provide for the defence of the Dutch East Indies rather than for that of the Mother Country. It is easily understandable that the Dutch should be concerned for the naval defence of these important possessions, which are always subject to a serious threat. But the provision of a fleet adequate to their defence would be a serious and expensive matter. Probably, in the end, local defence by means of destroyers and submarines will be relied on.

Of *Greece* I have spoken above. She has two good battleships of a pre-*Dreadnought* type, bought from the United States, and the armoured cruiser *Averoff*, which did such good service in the war with Turkey. But, since the *Salamis* has been commandeered by Germany, or is, at any rate, held up, she is rather weaker than she should have been by this time.

Of other neutral Powers there is really nothing to report. None of the Scandinavian States are making any new departures, nor are Spain and Portugal doing anything. The South American Republics are, of course, completely at a standstill. Nor can one write anything useful about the belligerent Navies, beyond giving a list of the losses they have suffered. Next to Germany Italy has suffered the most heavily, having lost two good armoured cruisers, *Amalfi* and *Giuseppe Garibaldi*, by submarine attack, and the battleship *Benedetto Brin* by internal explosion. France has lost the battleship *Bouvet* and the armoured cruiser *Leon Gambetta*, the gunboat *Zélée*, the destroyers *Mousquet* and *Dague*, and the submarine *Curie*. Austrian losses have not been severe, thanks to the prudence of the Austrian Fleet. They consist of the armoured cruiser *Kaiserin Elizabeth* and the light cruiser *Zenta*, with two submarines and a torpedo-boat. The Russians have lost the armoured cruiser *Pallada*, the light cruiser *Jemtchug*, the mine-layer

Yenissei, and three gunboats; and the Turks the battle-ships *Hairredin Barbarossa* and *Messudiyeh*, the light cruiser *Medjidieh*, and four gunboats.

The German losses have, of course, been very serious. They consist of the battleship *Pommern*, the battle-cruisers *Goeben* and *Moltke* (heavily damaged), the armoured cruisers *Blücher*, *Gneisenau*, *Scharnhorst*, *Yorck*, and *Friedrich Karl*, the light cruisers *Ariadne*, *Magdeburg*, *Köln*, *Mainz*, *Hela*, *Emden*, *Leipzig*, *Dresden*, *Königsberg*, *Nürnberg*, *Karlsruhe*, and *Breslau*, the mine-layers *Albatross* and *Königin Luise*, seven gunboats, seventeen torpedo-boats, a number of auxiliary cruisers and — who shall say how many submarines? In addition, two other battle-cruisers were badly damaged in the action off the Dogger Bank, and the *Roon* was reported heavily hit in the Baltic. Seeing that Germany has not been engaged in the Dardanelles operations, which have cost us so much, she has probably suffered more than any nation which has not ventured on a fleet action ever lost before.

If I were to attempt any estimate of the additions made to their strength by belligerent Powers, the estimate would not pass the Censor, and, besides, would probably be entirely inaccurate. From time to time we have heard stories of the marvellous new guns which the Germans are mounting in their ships and the great acceleration in construction which is going on. There is no adequate foundation for these reports, and most of them are, on the face of them, untrue. It appears likely, however, that they have pressed to early completion two battleships, *Ersatz Wörth* and *T*, both armed with 14-in. or 15-in. guns. To do so, they have delayed the completion of the *Kronprinz*, the last of their ships with 12-in. guns. We have also been told of the launch of a battle-cruiser named *Hindenburg*, which would, in all probability, be the ship of the 1914 programme, the *Ersatz Hertha* being delayed in order that the more heavily-armed ship may be hurried forward.

The supposed reconstruction of ships already far advanced towards completion in order to mount heavier guns is so unlikely that the above seems the only possible explanation of these reports, if there is any truth in them at all. It has also been suggested that the Germans have deliberately falsified their statistics for some years. But their conversion to the very heavy gun for naval purposes is so recent that

this also seems unlikely. There is no information available as to what they are doing in other classes of ships, though the claim is freely made on their behalf that they now turn out one completed submarine a week. If so, they may have completed thirty since the beginning of the war, in addition to ten which they then had in hand, and their boast that they have now more of those vessels than at the start might, in that case, be true. But all these statements must be received with caution. In any case, if they have the ships, it is by no means probable that they have any longer a sufficiency of trained officers and men to man them. Those which we have captured have been observed to have on board very large numbers, which suggests that they have been partly used for training fresh complements. But, of course, the "formidable losses" suffered have included the crews in training as well as the ship and her proper complement. The actual losses of the Germans are not, however, of so much consequence as the fact that our methods now permit us to indulge a considerable confidence that a submarine raid is likely to result in disaster to the submarine.

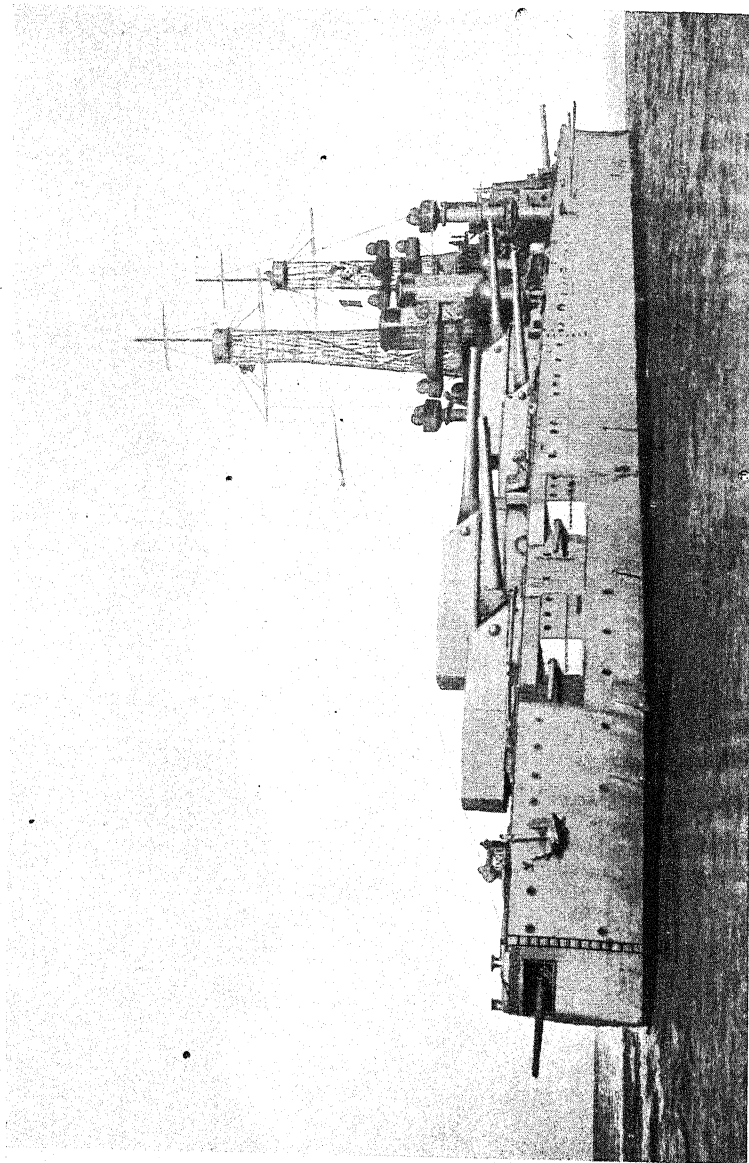
The Austrians, presumably, have now all four ships of the *Viribus Unitis* class in service, but as service consists in lying at anchor in harbour, it is not of much consequence whether they have or have not. It may be concluded from the official statement of the Russians that their first four *Dreadnoughts* in the Baltic are in service, and the dispositions of the Germans seem to bear out this supposition. The second four, which were laid down at the end of 1912, are unlikely to be completed yet, or for many months to come. But it is possible that one, at least, of the three laid down in 1911 for the Black Sea Fleet is in commission. If so, the opportunity will soon come for her to give evidence of her existence.

A survey of foreign navies is necessarily very imperfect. Much is unknown; more cannot, or ought not, to be said, and what is said must be stated in very general terms. But it is hoped that what has been written will be sufficient to give a bird's-eye view of naval progress. The general outcome is that the strongest Fleet has assumed a more dominating position than ever before, and that all the fleets of the Allies, as against the special foe of each, hold a commanding position—ourselves against the Germans, the Italians against the Austrians, and the Russians (in the

Black Sea) against the Turks. So we are left with the powerful French Navy as a general reserve, and to this may be added, for some purposes at any rate, the Japanese. This comparison shows the overwhelming superiority at sea of the Allies. Only in the Baltic, where the Russians are inferior to the Germans, have our enemies a limited command of the waterways, or even the power to use them.

If the strongest thus completely dominate the Navies of the less strong, the Navies of the actually weak are merely ciphers. When the Germans claim that they are fighting for the freedom of the seas and for the termination of British tyranny over them, it must appear to the Dutch, the Danes, the Swedes, and the Norwegians that, since naval defence by their own strength is a thing absolutely denied to them, the safety of their shores and their trade is better assured by the continued domination of the British Navy, which has held that domination for a hundred years and has never misused it, than it would be if supremacy at sea were left indeterminate between a number of comparatively equal Navies among which one of the strongest would be that of Germany, the apostle of the law of might against right, the treaty-breaker who denies the right of the small nations to exist. These smaller nations have for years past enjoyed effectual naval protection for which they have not paid a penny, and of which they have been almost unconscious. The sure shield of the British Navy has been cast over them as well as over our own shores and commerce, not from any altruistic motive, but because the continued existence and freedom of these small States which fringe the seaboard of Europe is a vital British interest. But, to our credit be it said, we have never grudged that they should thrive in trade and commerce, and we have given them the widest possible hospitality in our ports and markets. If there is, and will continue to be, a very large carrying trade under the flags of Holland, Denmark, Norway, and Sweden, this is because our maritime policy has been as different as possible from the monopolistic ideas of Herr Ballin. And because this is so, we may feel sure that, despite the alluring suggestion of the Germans, the end of the war will find Great Britain confirmed and strengthened in her prescriptive right to hold office as waywarden of the ocean highways.

GERARD FIENNES.



U. S. BATTLESHIP "ARKANSAS"
(Reproduced by courtesy of *The Illustrated War News*)

[Photo, E. Muller, jun.]

CHAPTER IV

Sea-Marches of Empire.

A Naval Chronicle.

A YEAR'S LESSON.

THE lesson inculcated by twelve months of war, and borne in, not on England alone, but on the whole world, is that above all other forms of power the lordship of the sea stands paramount. If this be true as a general axiom, how mighty is its application to Great Britain, whose kingdom and utmost territories are everywhere washed and bounded by those wild sea-marches which have from the beginning of creation severed nation from nation and continent from continent! On these debatable waters will the present war eventually be decided, and the nations that ultimately hold the sea will dictate their own terms to the vanquished.

A SWIFT VICTORY.

The lesson is no new one: it has been partially learnt for centuries. From Saxon times, through Norman, Plantagenet, and Tudor periods, sound English statesmanship, spasmodically it may be, but nevertheless with a certain continuity of vision, has insisted on the vital necessity to England of sea-power. Sometimes the wardens of the watery marches have slumbered and grown careless, but invariably the menace of peril has roused them to a timely sense of duty, and the British Navy has hastily been prepared for the coming danger: indeed, a special Providence would seem always to have watched over England, and to have moved the heart of her rulers, at the psychical moment, to strengthen her natural defences. Never was this special

protection more clearly—almost miraculously—manifested, than a year ago, when on August 3rd, 1914, on the very eve of the declaration of war, the Admiralty announced that “the mobilisation of the British Navy was completed in all respects at four o’clock this morning,” and added, “the entire Navy is now on a war footing.” That proclamation sounded the knell of German aspirations and the ruin of German hopes. It is true that much treasure was yet to be poured out, much precious blood to flow, ere Germany realised that the blow dealt her at four o’clock on August 3rd, 1914, was a mortal one. But she is even now comprehending it; even now she shudders at her red vision of a ruinous end. The victory is being silently won every day in the mists of the northern seas, and this fact alone is enough to explain Germany’s fixed rage against England and her impotent fury, as she feels the relentless grip of superior sea-power tighten day by day.

THREE MODES OF WIELDING SEA-POWER.

A Navy may exercise its power in three ways: (a) Static, (b) Dynamic, (c) Kinetic. The present war has shown, primarily, the importance of Static power. From its secret lair in the northern seas, the British Navy has made its Static power felt in the very heart of land-locked countries; silent, grim, and terrible, its pressure is felt in lands hundreds of miles from the ocean. In fear of its might, German merchant ships hurried to find safety in neutral ports, and that pride of Germany, the High Sea Fleet, hid itself in inland canals or behind walls of solid stone. On Germany’s idolised Navy the prison doors were shut. Troops were transported over miles of ocean; supplies and munitions poured into the Allies’ ports; millions of enemy troops were prevented from joining the colours of their Fatherland; life in innumerable homes flowed prosperously on, and commerce and trade flourished as though war were completely unknown.

So far-reaching has been this silent and motionless prowess of the Navy that but small scope has been given to either its dynamic or kinetic functions. The former has been exercised far too seldom for the taste of the officers and men who man our Navy—in some few squadron actions, in single-ship combats, and in bombardments of the enemy’s

coast; the latter, in the swift hunting of pirate cruisers and isolated warships from the seas, and in the escorting of multitudinous transports and munition-ships to their various destinations. With one sad but glorious exception—the action off Coronel—all these modes of wielding sea-power have been employed with success and triumph by the Allied Navies.

THE SIGNAL SERVICES OF THE BRITISH NAVY.

Had Great Britain not possessed a Navy, or had its chiefs been negligent or careless, the war would have run a vastly different course. The small but well-organised British Expeditionary Force could not have aided in stemming the onrush of the victorious Hun. British Colonial troops could not have obeyed the patriotic impulse to come to the help of the Mother Country. France would have been cut off from her Mediterranean supplies and her troops would perforce have stayed on the farther edge of the separating sea. No munitions could have been imported by the Allies, no food supplies could have come to the Allied peoples. French and Russian ships would have been forced to take refuge in home ports. The Colonies of the Allies would have been compelled to surrender to German and Austrian troops. Many extra millions of Germans would have flocked from overseas to the home colours, and the defenceless seaports and coasts of the Allies would have been ravaged and devastated by a ferocious enemy. The war would long ago have been ended, and the Kaiser, "the Imperial murderer," as an Anglican dignitary recently called him, would have posed as *Dominus Mundi*, and would have ruled the world as some barbaric god. Considering these things, we cannot wonder at the epileptic and murderous rage which the very name of England excites in German hearts; nor can one overrate the splendid service rendered by the British Navy, not only to Great Britain and to her Allies, but to the world at large.

THE CAPTURE OF GERMAN COLONIES.

The very mention of the captured German Colonies brings to one's mind the transcendent benefits that the British Colonies in general have bestowed on the Mother Country. In an article exclusively devoted to the Navy, one cannot

speak of the brilliant *élan* with which all our Colonies sent forth men to fight in the field, thousands of miles from home. All have done magnificently, and it would be invidious to distinguish one as more worthy of mention than the other. But the Australian Commonwealth and New Zealand, besides furnishing their quota of men—fierce warriors that vie with the heroes of old time—contributed also in a marked manner to our naval forces, and it is due to them that, one after another, the German Pacific possessions fell like ripe fruit into the lap of the British Empire. Oceania has indeed deserved well of the Great Mother. The names of the *Melbourne*, the *Sydney*, the *Australia*, and the *New Zealand* will be remembered with pride by our children's children yet to be. Before the first month of war was ended, New Zealand troops captured Samoa (August 31st), while the last station of German New Guinea fell to Australian forces on September 21st. Kiaochau, that German Colonial apple of the eye, was captured by the aid of our Japanese Ally on November 7th. General Botha in his brilliant campaign, crowned with success, in German South-West Africa, has gracefully acknowledged the aid given to his fine forces by the British Navy. Togoland surrendered unconditionally early in the war, on August 26th. In South-East Africa the name of the *Goliath* will be remembered in connection with the gallantry of Commander Ritchie at Dar-es-Salaam, where he won his well-merited Victoria Cross. Of Germany's remaining Colonies, the Cameroons and South-East Africa still remain to her. Both have been strictly blockaded for some time by the Allied Navies: the first is already tottering to its fall; if the progress made in conquering the second has been slow, it must be remembered that the territory attacked has a coastline of 400 miles and an area twice as great as that of Germany.

SQUADRON ACTIONS.

August 28th marked the date when the first of squadron actions was fought. German destroyers and submarines had been menacing the transports of the Expeditionary Force, and the Admiralty decided to put a stop once for all to a danger of this nature. Very efficient precautions were taken to head off stragglers, and Commodore Tyrwhitt, in the *Arethusa*, at the head of a destroyer flotilla, searched

for and found the enemy fleet, consisting of cruisers and destroyers, and gallantly attacked them in their own waters. On this occasion there were no serious British losses. Two German destroyers were sunk and others damaged: the remainder of Vice-Admiral Sir David Beatty's squadron, of which Commodore Tyrwhitt's flotilla formed a part, finished the work so gallantly begun and destroyed the *Mainz*, *Köln*, and *Ariadne*; the rest of the enemy fleet were put to flight.

On November 1st, the *Good Hope*, *Monmouth*, and *Glasgow* under Rear-Admiral Sir Christopher Cradock attacked von Spee's Pacific squadron off the coast of Chili, whither it had been chased by the *Australia*. The sea was rough, and on this account neither the *Good Hope* nor the *Monmouth* was able to make full use of its guns. The German squadron, on the other hand, consisting of the *Scharnhorst*, *Gneisenau*, *Leipzig*, *Nürnberg*, and *Dresden*, possessed heavier guns and greater speed, and had, moreover, the advantage of position. The *Good Hope* and *Monmouth* endeavoured to close and ram, but the odds were hopeless and both went to the bottom with flags flying. The *Glasgow* escaped for a happier day. That happier day was December 8th, 1914, when von Spee's division was surprised at the Falkland Islands by a British squadron under Vice-Admiral Sir Doveton Sturdee, of which the *Glasgow* happened to be a unit. The German squadron was utterly destroyed, with the exception of the *Dresden*, which was sunk off Juan Fernandez on March 4th, 1915, by the *Glasgow*, *Kent*, and *Orama*. The fourth squadron action took place on January 24th, when a British squadron under Vice-Admiral Sir David Beatty headed off in the North Sea a portion of the German Fleet which was on its way to attack defenceless English seaports. The *Blücher*, of 15,500 tons, was sunk, and two other battle-cruisers were badly damaged, one of them being the *Seydlitz*. On the British side the *Lion* was damaged but not seriously, and the casualties were few. The *Tiger* was also hit and three officers and eight men were wounded.

SINGLE-SHIP COMBATS.

On the evening of August 6th, 1914, the *Goeben* and the *Breslau* left Messina for the Dardanelles. The light cruiser *Gloucester* overtook them and opened fire. The *Breslau*

returned the fire, while the *Goeben* fired a torpedo. The *Gloucester*, however, hung gallantly on till Cape Matapan was reached, when she was recalled by wireless to the main fleet. But perhaps the most romantic of the single-ship actions, and recalling old-time naval duels, was that of the *Carmania* and the *Cap Trafalgar* off the island of Trinidad, to the eastward of Rio Janeiro, on September 14th. Both vessels were auxiliary cruisers and evenly matched; the British ship sank her opponent after an action of 1½ hours. The *Carmania* sustained some damage, which she made good at Gibraltar. The *Kaiser Wilhelm der Grosse*, a vessel of 14,000 tons, armed with ten guns of 4-in. calibre, was met and sunk by the *Highflyer*, a British cruiser of 5,000 tons displacement, off the Oro River on the West African coast. She had been endeavouring to arrest traffic between Great Britain and the Cape, with however but small success. Her disappearance freed the South Atlantic from piracy. On September 20th the light cruiser *Pegasus* was surprised in the harbour of Zanzibar, whilst refitting and cleaning her boilers, by the German cruiser *Königsberg*. Not only was the *Pegasus* taken at a great disadvantage, but she was completely outranged by the newer 4-in. guns of the *Königsberg*. The *Königsberg* remained outside the harbour out of range, and the *Pegasus*, besides suffering severe loss, was completely disabled. Her losses were officially reported as 25 killed and 72 wounded or missing out of a total crew of 234. The *Königsberg* met her doom later in the Rufigi River, where she had been chased by the *Chatham*, *Weymouth*, and *Goliath*, and partly disabled. It was not till July 1915 that she was destroyed finally by the monitors *Severn* and *Mersey*. The most mischievous of German raiders, the *Emden*, formerly a unit of the China squadron, had been doing incalculable damage to British shipping in the Indian and Pacific Oceans. While off the Cocos Islands, where she had landed an armed party to destroy the wireless station and to cut the cables, she was surprised by H.M.A.S. *Sydney*. A sharp action took place, but the *Sydney*, after suffering a loss of three killed and fifteen wounded, drove the *Emden* ashore, taking her crew prisoners. Captain Glossop, the commander of the *Sydney*, in destroying this raider performed a signal service. The last and most recent single-ship action was between the *Ramsay* and the *Meteor* on August 8th, 1915, off the coast of Norway,

in which the former was sunk. The *Meteor* was blown up soon after, to avoid being taken by British warships.

BOMBARDMENT OF THE BELGIAN COASTS.

Between October 17th and November 9th English flotillas several times bombarded the Belgian coast, forcing the enemy to retire inland. The new additions to the British Fleet of the *Monitor* class were now heard of for the first time and performed efficient service. More and heavier guns were, however, seen to be necessary. Boats of the *Scout* class were sent back to England, and cruisers, amongst which was H.M.S. *Venerable*, arrived to take part in the action. These were aided by the French flotilla, which worked admirably and harmoniously with the British squadron. On November 23rd Zeebrugge was again successfully bombarded by a British squadron. This was followed by a raid on Cuxhaven by seven British seaplanes, supported by submarines and light cruisers. The raid was in every way admirable. Flight-Commander Hewlett was at first reported missing, but, though he had a narrow escape from drowning, he was rescued by the Dutch and arrived safely in England on January 3rd. The Naval Air Service made a successful raid on Zeebrugge on January 22nd, and on February 16th forty-eight British machines raided the Bruges-Ostend-Zeebrugge district, causing much damage and striking the enemy with panic. German submarines were discovered in process of construction at Hoboken and Antwerp, and two British air-raids were made on these cities with good result—one on March 24th and another on April 1st. The Naval Air Service distinguished itself particularly on the Belgian coast. It was between Ghent and Bruges that Lieutenant Warneford won his V.C. by destroying a Zeppelin with a bomb from his aeroplane. On June 15th, a *Parseval* airship was destroyed by British airmen at Evere, near Brussels. An Allied fleet again bombarded Zeebrugge on August 23rd, and three days after Squadron-Commander A. W. Bigsworth destroyed a submarine off Ostend, gaining for himself the reward of the Distinguished Service Order.

MINE LOSSES

From the outbreak of the war Germany had shown the utmost disregard of military canons. With no consideration for the lives of neutrals or non-combatants, she had, in the most treacherous way, sown mines broadcast in the Home Seas, by German fishing boats disguised as British trawlers. Regular mine-layers were also engaged in the North Sea, sowing mines, contrary to all regulations, which floated while retaining their destructive qualities and were carried in all directions by wind and wave. It was while engaged in sowing mines that the mine-layer *Königin Luise* was sunk on August 5th by the *Amphion* off the east coast. One of the mines thus laid was unfortunately fatal to the *Amphion* on the following day, August 6th, 1914. Other naval losses by mines were the submarine *D5*, which came into collision with a mine dropped by the German squadron when retreating after their raid on Yarmouth on November 3rd, 1914, and the submarine *E3*, which was sunk off the German coast on October 18th. But the list of casualties and loss of life among fishing boats and trawlers pursuing their peaceable calling in the North Sea was really deplorable. Many neutral boats and British merchant ships were lost from the same cause, and a service of mine-sweeping operations was organised on a grand scale in the Home Seas. No pen can adequately describe the splendid services of these mine-sweepers. The boats used for this task were converted trawlers, manned by their own men—that hardy race of fishermen whose daily bread is gained in toil and jeopardy. Added to the dangers of the sea were now the deadly perils of the mine and submarine—perils faced as coolly as though they were but a part of the daily routine. In the Home Seas, in the Dardanelles, these men have left themselves a lasting name in naval history, and not a few have gained distinguished fame. The honour of initiating this splendid service belongs to Lord Fisher, whose keen mind and foreseeing brain saw the advantages accruing from the use of this class of men and boats.

OUR LOSSES BY SUBMARINES.

Germany had early brought her submarines into play. Six weeks after the outbreak of war, on September 22nd, England had to mourn the loss of the *Cressy*, the *Aboukir*,

and the *Hogue*, three British cruisers of an old type. These vessels were torpedoed one after the other by a German submarine and the loss of life was very severe.

Earlier in the month, on September 5th, the *Pathfinder* had been sunk by *U21*. Her destruction was so complete that only small fragments of wreckage were found by the fishing boats that came to the rescue as soon as possible. On October 16th the *Hawke*, the fifth British cruiser to fall a victim to submarines, was sunk in the North Sea; only a few officers and men were saved. It was on this occasion that the Germans first inaugurated their true policy of frightfulness. Some of the survivors of the *Hawke* had taken refuge on a raft: a British vessel standing by endeavoured to approach for the purpose of rescuing these exhausted men. Each time the attempt was made the submarine drove the vessel away, and each few minutes that passed saw the number of drowning men clinging to their last hope of life grow fewer and fewer, as, benumbed and exhausted, the fainting survivors relinquished their hold. The name of that submarine deserves to go down to posterity covered with infamy. It was the *U9*. On the last day of the same month, October 31st, 1914, a sixth British cruiser, the *Hermes*, while returning from a visit to Dunkirk, was sunk by a German submarine in the Straits of Dover: fortunately nearly all the officers and crew were saved. Eleven days later, on November 11th, the last submarine naval victim of 1914, the *Niger*, was torpedoed by a German U-boat and sunk in the Downs. On this occasion fifteen men were killed and two wounded, the rest being saved. The new year began badly for the British Navy in the sinking of the battleship *Formidable*, Captain A. N. Loxley, in the Channel. The gallant commander, who went down with his ship, signalled to the other ships in the neighbourhood not to stand by to help, as there were submarines in the vicinity. The Brixham trawler *Providence* rescued, in a very gallant manner, seventy survivors of the *Formidable* from that wintry sea; forty more managed to reach Lyme Regis, after rowing in the ship's cutter for twenty hours. In all 220 men were saved out of a full crew of 1,880. The auxiliary cruisers *Clan McNaughton* and *Bayano* were also lost, probably by submarine attacks; their losses were officially announced on February 23rd and March 12th respectively. Captain McGarrick of the *Castlereagh* stated

that on March 11th his ship passed through a quantity of wreckage and dead bodies floating. An enemy submarine prevented his attempt to search, chasing him for about twenty minutes. Evidently the débris and dead that he saw proceeded from the torpedoed *Bayano*. It was not till May 2nd that another naval loss was announced by the Admiralty. A series of small affairs had taken place on May 1st, 1915, near the North Hinder Lightship, when the destroyer *Recruit* was sunk by a submarine, four officers and twenty-one men being saved by the trawler *Daisy*. At the same time two German destroyers attacked the trawler *Columbia*. They paid dearly for their temerity, however, for a division of British destroyers pursued and sank them both. No casualties attended this success, but forty-four German seamen and two of their officers were rescued from the sea and made prisoners. The little Cardiff trawler *Mauri* distinguished herself in this action, ramming and sinking a German torpedo-boat! Two British torpedo-boats, Nos. 10 and 12, were torpedoed and sunk by a submarine on June 10th, 1915, off the East Coast. The auxiliary cruiser *India* met with the same fate on August 8th, 1915, in Norwegian neutral waters.

THE DARDANELLES.

Early in 1915 it was determined, if possible, to face the Straits of the Dardanelles, with the object of taking Constantinople. If the difficulties in the way were great, the prize was a superb one. Accordingly, on February 19th, squadrons of the British and French Fleets attacked the forts at the entrance of the Straits. The co-operation of the Naval Air Service aided the accuracy of the firing. The attacks were more or less spasmodic, considerable intervals of time being allowed to elapse between the several attempts to reduce the forts; the Turks were thus allowed opportunity for strengthening the fortifications, and the task, deprived of military co-operation, became increasingly difficult with the lapse of time. It was in the early stages of the forcing of the Dardanelles that serious losses were inflicted on the Allied Fleets, the battleships *Irresistible*, *Ocean*, and the *Bouvet* of the French Fleet, being destroyed by mines on March 18th, while German submarines succeeded in torpedoing the battleships *Goliath* on May 12th,

Triumph on May 25th, and *Majestic* on May 27th. The Australian submarine *AE2* was also lost in the Sea of Marmora. These were severe losses indeed, and it soon became evident that the forcing of the Straits without a military force co-operating by land might be considered an almost desperate undertaking. Land and sea forces were therefore determined to be employed in conjunction with each other, and it was while the *Royal Edward* was conveying troops to the Gallipoli Peninsula that it was torpedoed in the *Ægean*, with great loss of life. Our other naval loss in the Dardanelles was that of *E15*, which ran aground under the Turkish forts on April 18th, its crew being captured: the submarine itself was subsequently destroyed by the picket boats of the *Triumph* and the *Majestic*, in order to prevent its falling into the hands of the Turks.

WORK OF OUR OWN SUBMARINES.

But the losses have not all been on one side, and our plucky submarines distinguished themselves greatly from the very outbreak of the war by their success in legitimate operations. As early as September 13th the submarine *E9*, Lieutenant-Commander Max Horton, torpedoed the German cruiser *Hela* off the German coast, and on October 6th sank a destroyer off the Ems. On December 13th the submarine *B11*, a craft of primitive type, Lieutenant-Commander Holbrook, V.C., entered the Dardanelles, and, in spite of the swift current, dived under five rows of mines and torpedoed the Turkish battleship *Messudiyeh*. Though pursued by gun-fire and torpedo-boats, Lieutenant-Commander Holbrook returned safely to his base, though on one occasion his boat was submerged for nine hours. On June 2nd, *E11*, Lieutenant-Commander Nasmyth, torpedoed two transports in the Sea of Marmora and compelled yet another to run ashore. To these deeds she added another, penetrating into Constantinople itself and sinking a transport alongside the Arsenal. The effect of this exploit was prodigious; the Turks were completely terrorised and their transport service entirely paralysed. *E14*, Lieutenant-Commander A. C. Boyle, V.C., stayed away from its base for three weeks, sinking two gunboats, two transports, and running another transport aground. *E7*, Lieutenant-Com-

mander Archibald Douglas Cochrane, D.S.O., did great damage to enemy shipping and, after blocking the railway line near Kura Burnu by bombarding it from the sea, shelled a troop train and blew up three ammunition cars attached to it. On August 7th, 1915, a British submarine sank the Turkish battleship *Hairreddin* in the Sea of Marmora, and on the following day sank the Turkish gunboat *Berk-i-Satvet*. In the Baltic on July 7th *Eg* again distinguished itself by torpedoing and sinking a German cruiser of the *Pommern* type. On July 26th a German destroyer of the *G* class was torpedoed in the North Sea by a British submarine, and on August 2nd a German transport, full of troops, was torpedoed in the Baltic, probably by *Eg*. On August 18th a German *Dreadnought*, the *Moltke*, was reported sunk by a British submarine in the Gulf of Riga. As will be seen, these exploits show that our submarines are commanded by men possessing in the highest degree skill, courage, and audacity. Great Britain can also pride herself that each operation was an act of legitimate warfare, shedding fresh lustre on British arms, thus differing materially from the contemptible warfare waged by the Huns on unarmed combatants.

THE SUEZ CANAL AND THE PERSIAN GULF.

Nothing could have been more ridiculous than the abortive fiasco of the attempt by the Turks to obtain command of the Suez Canal, which ended on February 2nd with the complete defeat of the Turks and the ignominious retreat of the remainder of their army of 12,000 men. There has been no repetition of this attempt. The Navy distinguished itself in the Suez Canal—old torpedo-boats, which had been hitherto considered entirely useless, performing excellent service. Lieutenant G. Carew of H.M.S. *Hardinge* here won the Cross of the Distinguished Service Order. Great success also attended British arms in the expedition of the Persian Gulf. As early as November 1914 the Turks were defeated in two serious actions, the last ending in the capture of Basrah, the terminus of the Baghdad Railway. In the following month the Turks were again defeated at Qurnah, where 1,300 prisoners were taken and 14 guns. By this victory the British became masters of the territory extending from the junction of the Tigris and the Euphrates

to the Persian Gulf. Ahwaz was occupied in March after a fierce battle in which the Turks lost 6,000 out of a force of 15,000. Amarah was surrendered on June 3rd, with 30 officers and about 1,000 soldiers. Military and naval operations were combined in this expedition, which perhaps was the most disagreeable of all those in which British Forces were engaged. The country was arid and unhealthy, and officers and men suffered much from want of water. Captain Wilfrid Nunn, R.N., who succeeded in penetrating the country, nearly 250 miles from the sea, in his tiny sloop the *Espiègle*, accompanied by a small flotilla, has gained the Distinguished Service Order for gallantry and skill in directing operations, resulting in the capture of Qurnah. Little has been heard of these operations, which entailed much hard fighting.

THE SUBMARINE BLOCKADE.

On February 28th, 1915, Germany, enraged at seeing her commerce destroyed and her own marine power reduced to impotence, proclaimed a blockade of the British coasts by submarines, thinking in this way to terrorise Great Britain and to cut off her supplies. Without mercy or pity she directed her warfare against non-combatant and neutral lives, torpedoing and shelling trawlers, fishing boats, and passenger ships. The roll of vessels and lives lost by this cynical savagery is far too long to be detailed here, but on March 28th the indignation of the whole civilised world was aroused by the torpedoing of the *Falaba*, an Elder-Dempster liner, with the accompanying loss of 112 lives. Disgust was mingled with indignation, for, after sinking this vessel, the Germans revealed their true national brutality by jeering, from the deck of the submarine, at the death-struggles of their drowning victims. The loss of the *Falaba* was dwarfed on May 7th by the torpedoing of the giant *Lusitania*. In this disaster 1,500 men, women, and children lost their lives. The *Armenian*, a Leyland liner, was sunk by a German submarine on July 1st, twenty of the crew, mostly Americans, being drowned. Another Leyland liner, the *Iberian*, was torpedoed on July 31st, six of the crew being killed by shell-fire. A White Star liner, the *Arabic*, met with the same fate on August 19th and some American passengers were drowned. All these murderous attacks

were marked by the most brutal cynicism, no effort being made on any occasion to save the survivors. After seven months of this brutal and useless warfare the Germans begin to realise that the game is not worth the candle. As Lord Selborne said on August 26th, the Government have the submarine menace well in hand. The Germans, wearied at sending out submarines which returned not again, have recently given out (August 26th) through their Ambassador at Washington, Count Bernstein, that no more merchantmen were to be torpedoed without warning. It is true that just three days later the *Arabic* fell a victim to the murderous submarine and on September 7th the *Hesperian*, another Leyland liner, was torpedoed with a loss of twenty-five lives. But the whole world knows now the value of the word of honour of a German—if such a fine word can be applied to anything German. The only effect of Count Bernstein's declaration was to increase the confidence of Great Britain in the methods employed by the Admiralty in dealing with the submarine menace. Mr. Balfour, who is neither exuberant nor demonstrative in his statements, in a letter to a private correspondent characterised the German submarine losses as "*formidable*." Germany has neither terrorised us nor touched the efficiency of our mercantile marine. She has, however, blackened her face among the nations and stained her hands with women's and children's blood. Her depredations have had no military value, nor have they affected the punctual arrivals and departures of British merchant ships. She has caused an incalculable amount of private suffering and inflicted individual losses on non-combatants. That the crimes committed by her submarines were known and connived at by the Kaiser, nay, probably carried out by his own personal orders, is proved by the fact that the Imperial Murderer has conferred the highest decorations on those who have carried out these abominable crimes. Meanwhile her main object has been rendered entirely negative by the courage of our merchant seamen and the admirable suppression by the Admiralty of the German submarine. No one can praise too highly the valour and devotion displayed by our merchant sailors. Faced with appalling danger from a merciless enemy, they have gone about the business of the nation with a cheery good-humour that no peril, however frightful, could dispel. They have fought with our Navy,

swept mines with the plucky sweepers, and gone out and come in on business ends as if no such thing existed as a German, no such weapons as torpedoes or mines. At the present moment the number of merchant vessels that enter or leave our ports is higher, perhaps, than the average number in peace-time. All honour then to our merchant seamen, for they have deserved well of their country!

GERMAN "FRIGHTFULNESS."

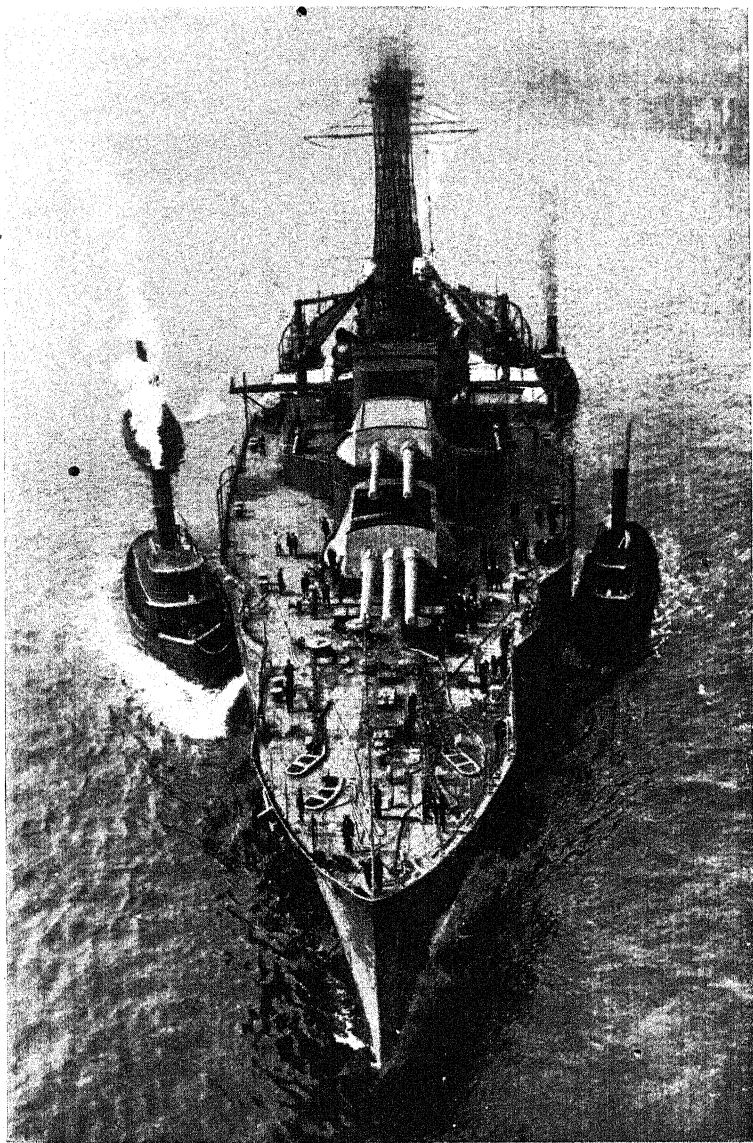
Other aspects of German frightfulness during this first year of war are the raids on defenceless seaports. A raid on Yarmouth and shelling of the town on November 3rd was followed on December 16th by the shelling of the Hartlepoons, Whitby, and Scarborough. In the middle of the month of August 1915, a submarine shelled the Cumberland coast. On this latter occasion no harm was done, but a long "butcher's bill," principally of women and children, resulted from the attacks on Yarmouth and other towns on the East Coast. Nothing has shown more clearly German total lack of shame and decency than their firing on *Er3*, which had gone aground on a Danish island in neutral waters, and their shelling of the men struggling in the water. One cannot hate such an enemy; one can only despise him. The end of the first year of war shows Germany spotted with every foulest crime and red from head to foot with innocent blood. It is a matter of devout thanksgiving that one is able to realise that the shield and scutcheon of England is as unstained in August 1915 as it was a year before this unholy war was forced on her. The end may not be yet. But with a clear conscience we can face the dim future and its possible failures with a certain conviction that those dread Eumenides that avenge innocent blood even now have their whip of snakes ready to scourge the blasphemer, the murderer, and the ravisher. *Pede claudo*, Nemesis follows the track of the Hun. For us victory is certain, but for them "a certain fearful looking-for of judgment and fiery indignation, which shall devour the adversaries." On their own head be it!

"X."

CHAPTER V.

The Collapse of German Naval Speculation.

PESSIMISTS are apt to show irritation when their gloomy survey of the past and still gloomier prophecies are interrupted by a reference to the achievements of the British Navy. "Oh, yes, of course," they peevishly exclaim; "but the Fleet can't march across Flanders or into Poland, and the naval phase of this war is a mere side-show." Some, of surpassing hardihood, even deny the Navy the merit of its brilliant achievements. "The German Fleet," they retort, "is still intact, and we have had heavy losses in men and ships without gaining anything for it." I have no doubt the overwhelming importance of the Navy's services in the present war, and their direct and indirect bearing on the main issue, will be dealt with by abler pens than mine in this year's NAVY LEAGUE ANNUAL. But on one point, at least, I can bear personal testimony. The magnificent work of the British Fleet is nowhere more thoroughly recognised than in Germany. Although they would rather rot than say so openly, the German papers for months past have been hinting at the completeness of the Fatherland's isolation from the over-sea world, and throwing out feelers obviously in the direction of the Navy Department in Berlin. Though they dare not give utterance to their thoughts, even if they would, they are patently anxious to know what their own costly Fleet proposes to do, beyond the futile, window-dressing tactics of its submarine and aerial auxiliaries. The submarine "blockade" is now almost universally recognised in Germany as a burst bubble. Zeppelin attacks on this country are always greeted with joy, simply because they satisfy the murderous fury of the people. But I take leave to doubt if the common or garden German



U.S. BATTLESHIP "NEVADA"

[Photo, Bain]

is under any illusion as to the real military value of these assassin strokes.

No. From the great Tirpitz himself, down to the humblest Teuton taxpayer, there is profound misgiving at the posture of the war at sea. It is true the German masses have practically no conception of what sea power, in the widest sense, connotes. But Tirpitz and his colleagues take pride in their exhaustive study of Mahan, and they at least appreciate the truth of Raleigh's grandiloquent axiom. Of course the public must be amused, and in the beginning it was thought that the submarine war on commerce would be a cheap way to amuse them. Since its employment in this work has been found to be more costly to the assailants than to the assailed, the submarine, if it has not been altogether put by, has been reduced to its proper place as a useful but unreliable side-arm. It has been ousted by the Zeppelin, in regard to which the same hopes are cherished. The folk in Berlin believe the Zeppelin can attack without much risk to itself. This, it is to be hoped, will be proved an equally egregious fallacy by the further development of the war in the air.

But whatever changes may attend the onward march of science, no one but a beer-befuddled German believes that Zeppelins and submarines make a Navy in themselves. The capital ship still deserves its designation. The giant battle-cruiser, of almost fabulous speed and shattering gun-power, has more than vindicated its creation. Light cruisers and destroyers have proved themselves quite indispensable adjuncts in both major and minor naval operations. In a word, nothing has yet occurred to confute the principle that the command of the sea can only be won by fighting for it. It cannot be won on the cheap by "frightfulness." It took Britain several centuries of hard fighting to gain this inestimable possession. It has been hers from 1805 down to the present moment. So far, at all events, the war has not changed the situation, save for the better. As students of naval history well know, Britain's command of the sea was nothing like as complete in the years immediately succeeding Trafalgar as it has been since August 3rd, 1914.

"Ah," say the confirmed pessimists, "how can we be said to command the sea whilst the formidable German Fleet is virtually intact, and may at any moment come out

to contest it?" This argument has been repeatedly advanced by Dismal Jemmies during the war, and treated with much more respect than it deserves. Britain's "Command of the Sea" is no mere phrase, but a cold, concrete fact that confronts the world a thousand times a day. The sea, save for the Baltic and the Euxine, is entirely at her service. She and her Allies can use it, and do use it, continuously, and more freely in this war than they ever had occasion to do in peace. Germany and *her* Allies, on the other hand, are completely barred from all access to blue water. Not even in the Baltic, which Germany considers and claims as her own particular marine preserve, can her ships move with any degree of freedom. Elsewhere no German ship that is not submersible dare venture beyond the range of its land batteries.

History records no fact so astounding as that we have to do with here. The Germanic Empires, with a total population of more than 120,000,000, are for all practical purposes as isolated from the sea as Switzerland. Other writers will, I hope, explain the magnitude of the issues which emerge from this one clear fact. I am concerned simply to record it, and commend it to the earnest consideration of everybody who is still doubtful as to the nature and meaning of the task which the British Navy has performed for more than eighteen months with superb skill and unbroken success.

Had the Germanic States been land Powers pure and simple, with but paltry naval forces and insignificant maritime interests, this task would have been simple to perform and its effects correspondingly unimportant. But one of these States, Germany, has for years had the second largest Fleet in the world; and as for her maritime interests, we cannot do better than quote the German Kaiser himself, who said: "Our future lies on the water." That can only have meant that Germany's future was intimately bound up with, and wholly dependent upon, her full freedom to use the sea at any time and all times. If it did not mean that, it meant nothing; and whatever other peculiarities the Kaiser may have, his formal speeches have never been characterised by empty verbiage. If, therefore, we accept this phrase as it stands, we are bound to infer that if Germany is barred from the sea, her future will be jeopardised. Before the war we were continually

hearing from German professors, historians, economists, and business people that without a great Navy to ensure the safety of their coasts, their over-sea trade, and their colonies, the Fatherland could not possibly maintain itself as a first-class Power. The German Navy, they insisted, had no directly aggressive purpose. Rather was it an insurance policy against the economic ruin and general collapse that would inevitably follow on prolonged isolation from the ocean. There is scarcely a German of eminence who has not spoken or written in this sense within the past twenty years.

It was only on the clear understanding that the naval forces projected would confer at least partial freedom of the sea, even in case of war with the leading Naval Power, that the German nation gave freely of its treasure to Admiral von Tirpitz. He on his part gave an absolute guarantee that compliance with his demands would render German sea trade and the colonies immune from serious molestation in any contingency. As is well known, he got all he asked for. The nation had more than fulfilled its own side of the bargain, and its confidence in Tirpitz was so great that the prospect of war with the mightiest Naval Power was regarded with equanimity. How woefully Tirpitz failed to make good when the emergency at last arose is now notorious. The Fleet which he had built up at enormous cost has proved itself incapable of performing a single one of the functions for which it was created. It has failed to strike a blow on behalf of the incalculable interests the protection of which had been entrusted to it. It has not moved a finger to avert the ruin of Germany's maritime trade, which contributed upwards of 60 per cent. to the total revenue of the Empire. It has made no sign while colony after colony has been conquered by the Allied forces. And, above all, it has not even tried to stem the tide of invasion which will soon roll up to and over the German frontiers by way of Belgium and France.

"The German Navy is still intact." True, but at what a colossal price to Germany! Certain ingenious people have striven to draw a parallel between old King Friedrich Wilhelm, the father of Frederick the Great, and the present Kaiser. The royal drill-sergeant made it the supreme object of his life to create the finest army in Europe, and that object he attained. But having done so he became an

incorrigible pacifist. His guiding principle was peace at any price. Loss of honour, the sacrifice of national interests—anything was better than that his incomparable grenadiers should be risked in war. Under his rule the Prussian Army had ceased to be an instrument of State; it had become a royal toy. William the Second has devoted much of his busy life to the building up of a model Navy. For twenty-five years he laboured hard at this task, and was rewarded by the possession of a Fleet which, though numerically second in order, was by common consent admitted to be almost unrivalled in organisation and efficiency. In Germany the late King Edward is popularly supposed to have referred to the German Navy as "Willy's toy." This anecdote, whether true or false, stung the Germans to the quick; but was it altogether unwarranted? Certainly German naval strategy during the past eighteen months strongly suggests the existence of an order that the Fleet must under no circumstances be risked. The Army has been sacrificed without stint. Whole corps have been hurled against impregnable positions, only to be driven back with appalling slaughter. In the plains of Flanders and the marshlands of Poland, the soldiers of the Kaiser have on innumerable occasions been sent to certain death in their thousands. Already the Prussian casualty lists alone have passed the second million. Glittering Prussian guardsmen and drab Landsturmiers of middle age have been driven to the shambles with a callousness to which military history affords few parallels. But when we turn to the German Navy we see a very different picture.

On the eve of war the High Sea Fleet was cruising in Norwegian waters, in attendance on the Kaiser. When the situation became acute it received orders to return to Kiel at full speed, and there must have been anxious hours at the Wilhelmstrasse until the last squadron had cast anchor in Kiel Bay. Judging others by themselves, the Germans had always believed that Great Britain meditated the annihilation of their Fleet by a treacherous *coup*, to be delivered in just such a situation as arose on the eve of war. Hence they were, no doubt, agreeably surprised when the expected blow did not fall, and they have probably ever since been sneering in secret at the "crass stupidity" of the British for neglecting to take advantage of such a unique opportunity. Once at Kiel the German Fleet belied the

hopes of foe and friend alike, by taking up what seem likely to become permanent quarters. A certain redistribution seems to have been carried out, part of the armoured ships having been gingerly transferred to the North Sea base. Indeed, it has more than once been stated that the bulk of the High Sea Fleet is now concentrated at Wilhelmshaven. Be this as it may, the British Admiralty is doubtless well informed. The point is that, whether at Kiel or Wilhelmshaven, the world's second Navy has ever since continued in a state of suspended animation. Apart from not altogether reliable news from the Baltic, there is nothing to show that the *Dreadnought* battleships have been to sea since the declaration of war. Some of the older armour-clads have been risked in futile assaults on the Russian coast, and at least three of them (*Pommern*, *Friedrich Karl*, and *Prinz Adalbert*) paid dearly for the adventure.

In the North Sea, over twelve months have elapsed since the German war flag has been seen on any surface ship. The foreign-service cruisers, with the much-lauded exception of the *Emden*, made, on the whole, an indifferent showing. Admiral von Spee, with his two armoured and three small cruisers from the China Station, gained the one honest success which has attended German arms at sea. He fought bravely and well, and though his victory was marred by the inhumanity of the *Nürnberg's* captain in refraining from any attempt to pick up survivors of the *Monmouth*, von Spee crowned a fine seamanlike career by dying gallantly at the head of his squadron when Nemesis overtook it at the Falklands.

There was one point about the action off Coronel to which insufficient attention has been paid. That Admiral Cradock was not only outnumbered, but hopelessly outgunned, is well known. In heavy, long-range ordnance he could oppose only two weapons to sixteen on the other side. That disparity alone made the issue a foregone conclusion, assuming German gunnery to be moderately good. But in one other respect the enemy enjoyed what was probably a still greater advantage. When war broke out, the *Scharnhorst* and *Gneisenau* had already been some years in the Far East, permanently in commission. The majority of the crews consisted of long-service seamen, who were immensely superior to the average short-service men in the home fleet. The shooting of both ships had for years been well

up to "China" average, which is always high, and the vessels themselves, having had the repair and overhauling facilities of the well-equipped Tsingtau dockyard at their command, must have put to sea in August 1914 in first-class condition.

Admiral Cradock's command, it will be remembered, was composed of the armoured cruisers *Good Hope* and *Monmouth*, the light cruiser *Glasgow*, and an auxiliary. Previous to the test mobilisation at Spithead shortly before the war, neither of the armoured ships had been in full commission. Their crews were strange to them, and the interval between the mobilisation and the Coronel fight was too brief to permit of the thorough "shaking-down" without which the high state of efficiency demanded by war could not be reached. The two ships were fought as British ships always have been fought, with a splendid courage to which even the victors paid tribute. Both went down with colours flying, and not a man was saved from either. This action will assuredly rank as one of the most glorious, if melancholy, events in the history of the British Navy.

The *Emden* apart, few of the scattered German cruisers did anything particular to distinguish themselves. For a time the *Karlsruhe* made things uncomfortable in the Atlantic, till she disappeared mysteriously in circumstances not yet fully explained. One by one the other cruisers were hunted down and destroyed, and before the end of 1914 most had been accounted for. Those who have any knowledge of the high hopes which Germany reposed in the cruiser war against British commerce can gauge the disappointment and chagrin with which this prompt clearance of the seas was viewed in Berlin. It was not at all according to programme. The fact is that the extraordinarily fortunate coincidence of the test mobilisation of the British Navy, just three weeks ahead of the war, cut at the very roots of the whole scheme of German naval strategy. Certain eminent naval writers have not hesitated to assert that the really decisive victory of the war at sea was won by Britain before a shot had been fired. The literal truth of this statement is manifest.

The German Navy was conceived, created, and organised as a purely offensive instrument. Surprise was the very essence of the plan it was intended to put into execution.

No British statesman ever spoke a truer word than Mr. Churchill when he intimated that Germany's intention was to strike at her "selected moment."

I am not familiar with the secret history of the crisis which led up to the war, but I am absolutely convinced that had the opinion of the naval chiefs been sought and acted upon, Germany would not have drawn the sword when she did. To explain her action we must fall back on the theory that she counted the neutrality of this country as assured. In that case her Navy might, perhaps, have fulfilled its relatively simple mission with success, and earned its maiden laurels very cheaply. On that understanding, Grand-Admiral von Tirpitz could have informed his Imperial master with a light heart that the Fleet was fully ready to do its share. But if the Naval Secretary had any inkling of the real situation we can well imagine him as pleading, with all the eloquence at his command, for delay, and the longer the better.

The battle-fleet may have been, and no doubt was, quite ready for any job in reason; but the war plans which Herr von Tirpitz and the Admiral Staff had laboured at for years, and which, framed to meet every thinkable emergency, were complete to the minutest detail, rested wholly on the supposition that the projected attack on Great Britain would not be made without weeks, probably months, of warning beforehand. At Bremerhaven and Cuxhaven, the home ports of the North German Lloyd and Hamburg-America Line respectively, were large sheds in which were housed the armament and other war equipment of the vast fleet of prospective commerce-raiders, all of which were to be in or near their prescribed area of operations before war had been formally declared. Official handbooks tabulate about a dozen German liners as having been earmarked for cruiser service. The real number, however, was nearer one hundred. Some carried part of their armament always on board. Had the storm broken according to the Tirpitz programme, instead of isolated raiders here and there, scores of well-armed German auxiliaries would have simultaneously begun operations at as many points. Even supposing there had been sufficient British warships available to organise a prompt and comprehensive hunt, the damage which the raiders could have inflicted on commerce before being rounded up would have

been staggering, and might have proved fatal. Had the naval war opened at Germany's selected moment, it would have found the British Fleet sadly short of cruisers, for a large number of these vessels which figured at the test mobilisation, and were thus immediately available when the campaign opened, would not have been in that condition in the ordinary run of things. The mobilisation was announced as far back as February 1914, so that the authorities had four clear months in which to prepare. The cruiser fleet was, in consequence, at maximum strength before the actual breach occurred; yet, even so, it has been admitted by Mr. Churchill in Parliament that the Admiralty had no light task in putting their hands on the cruisers necessary to hunt down the very few German raiders that managed to get to sea.

For years the naval critics had been demanding a large increase in the establishment of fast light cruisers, yet few of them can have anticipated the special circumstances which, in the early part of the war, made such heavy demands on available material. At the outset it was impossible to spare many ships for the specific purpose of chasing the commerce-destroyers. From many distant points of the earth great convoys of transport steamers were converging on England, and it was imperatively necessary to provide adequate protection for each of these flotillas, more especially as several of the routes to be traversed lay well within the radius of German cruisers known to be at large. On one occasion a warship on convoy duty was fortunate enough to destroy the most dangerous of all the enemy's corsairs, as when the *Sydney* put an end to the *Emden* off the Cocos Islands. But the fact remains that for several months the pursuit of the raiders had to be maintained with inadequate forces. The problem, as I have shown, would have been infinitely more complex had the original German plan come to fruition. That it did not do so we owe, under Providence, to the mobilisation of the Fleet in July 1914, and hardly less to the promptitude and resolution of the Admiralty in dispatching the Fleet to its war stations as soon as the political situation became really threatening.

Thus the German *Kreuzer-Krieg*, from which so much was expected, was a hopeless proposition from the beginning. The vast majority of the would-be raiders, finding their

way out to sea barred by the British cordon of patrols, had perforce to remain in port, where they have been ever since. How serious to German hopes this failure was can be measured by the fact that every German authority on future warfare had been in the habit of affirming that the sole prospect of success in a war with England was a sudden, extensive, and utterly ruthless assault on her sea-borne commerce. Nowadays it suits the enemy's statesmen and newspapers to express pious horror at Britain's alleged plan of "starving out" the German nation. The rank hypocrisy of their attitude is too obvious to need emphasis. They know perfectly well that the deliberate intention of their own Naval Staff was to cut off the food supply of this country. Herr von Tirpitz and his colleagues would have treated with contempt and derision any suggestion that this plan ought to be abandoned because, if successful, it would condemn to starvation and misery millions of innocent civilians, men, women, and children. But when these clever people found their plot was foiled, and, instead, that it might possibly recoil on their own heads, they became quite Pecksniffian, and wept in public at the bare prospect of a shortage in daily ration.

Readers who have kept their eyes and ears open do not need to be told that as a substitute for the ambitious plan of wholesale commerce destruction sketched in the foregoing, submarine piracy has proved a monumental failure. That it should ever have been initiated was a patent confession of failure. However, it served to distract popular attention from the irreparable blunders of those in authority, it made a strong appeal to the national imagination, and it began with all the advantage of novelty. At first sight there seemed to be no effective antidote. Caught more or less unawares, Allied and neutral shipping appeared to lie at the mercy of the latter-day pirates, whose orders were to sink at sight without troubling over the fate of passengers and crews. Nevertheless, with almost every factor in their favour, the submarines failed to do more than make themselves a nuisance. At the height of their activity the damage they caused was insignificant, in proportion to the dimensions of the Allied mercantile marines. We may be sure they did not begin until a considerable number of new boats, specially designed to endure long spells of work in open sea, had been completed, and arrange-

ments made for a rapid multiplication of the flotilla. It is not the German way to embark on any important enterprise until every contingency that suggests itself has been provided against. The submarine "blockade" was certainly a makeshift, but nothing was left undone to make it a great success.

There were not a few people in this country who, in February last, were seriously alarmed at the prospect opened up by the torpedoing of the first batch of merchantmen under the false blockade. And it would be foolish to deny that grounds for this apprehension did exist. But there were other thoughtful observers who reflected on the fact that the British Navy contained some of the finest brains in the world, and that its resourcefulness was proverbial a good many years before the war. If it lay in human power to devise an effective defence against submarines, the Navy might safely be left to solve the problem. And this faith has been abundantly justified. It has more than once been officially stated that the submarine menace is well in hand. That assurance is scarcely needed. The results are speaking for themselves. Not one of the anticipations freely indulged in by Herr von Tirpitz and his reptile Press last February has been realised. Food, raw material, and munitions of war continue to flow freely into British and other Allied ports. Shipping goes on almost literally "as usual." Neutrals, paying no heed to what they now know to be Germany's empty threats, ply between their ports and ours almost oblivious of the fact that their course takes them right through what was long ago announced at Berlin, with much theatrical pomp, as the "war zone." Above all, the "blockade" has had absolutely no effect on this country's military communications. The British Army in Flanders and elsewhere receives its reinforcements, provisions, and munitions with the same certainty and regularity as prevailed before the piratical *U*-boats were dispatched on their mission of destruction. The "blockade" has therefore failed at every point. Judged in the light of what was confidently expected from it, it is more than a failure—it is a positive farce.

For the first few months of the war the one question of absorbing interest to the people of this country was: "Will the German Fleet come out?" As time goes on without bringing any sign of impending activity on the part of the

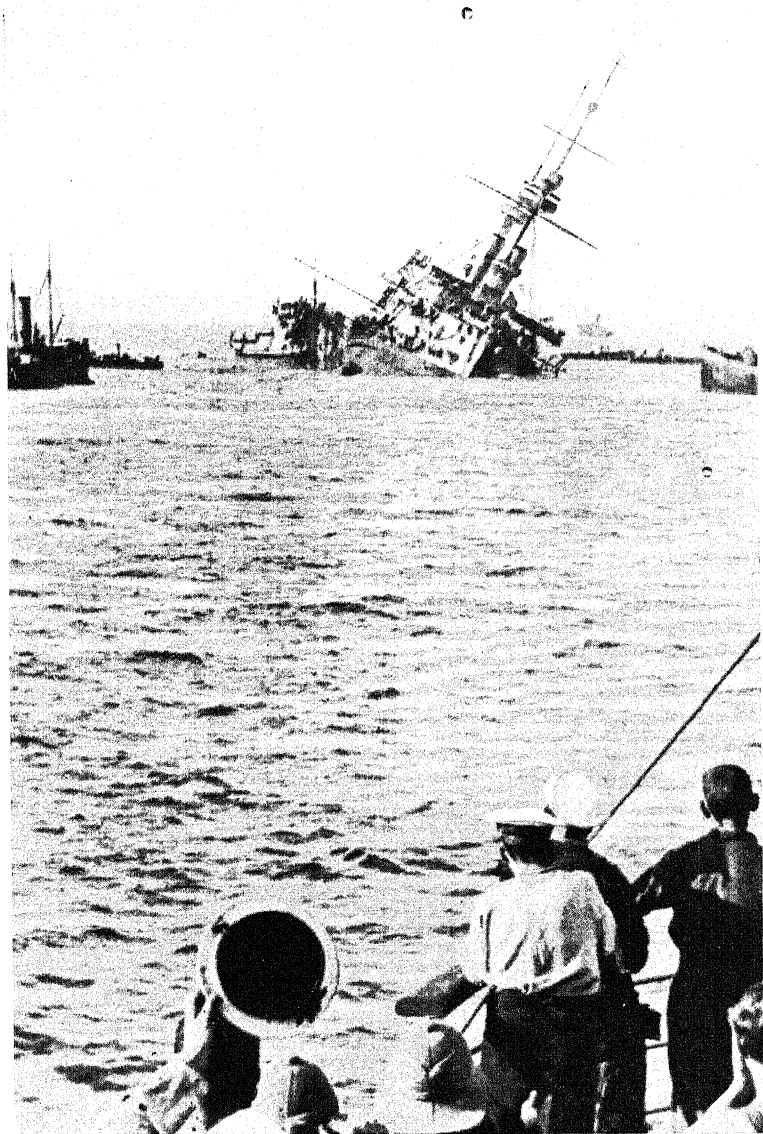
Kaiser's battle-squadrons, the impression gains strength that they will never leave their moorings until peace has been signed. There is much to be said for this theory; on the other hand, it is not difficult to imagine circumstances which may compel the German Fleet to accept a decisive combat. The rulers of Germany well know that a decisive success at sea would do more to ensure their final and overwhelming victory in the world-war than a score of brilliant triumphs on land. Hence, to gain such a success they would sacrifice everything—even the Navy; and whilst the glittering prize remains within their vision, be it ever so dim and remote, they are not likely to spare any effort which brings it nearer to their reach. At the same time, it is hard to imagine any development, barring miracles, which would place the enemy's Fleet in a position to accept battle without courting absolute annihilation. Despite the wise reticence of official circles, the immense additions in vessels of every type made to the British Navy since last year can be intelligently surmised. Especially in capital ships the British margin has greatly increased. To-day Germany is much less dangerous at sea than she was twelve months ago. Granting that her facilities for new construction are large, it is unquestionably true that she cannot approach the maximum output on this side. In this respect time is indubitably working for the Allies.

A last desperate sortie on the Berserk principle, with every German ship marking down its "opposite number," ending in a mad *mêlée* in which the contending fleets lose ship for ship, is a picture which has appealed to many imaginations here, and doubtless in Germany as well. But no such inspiring spectacle is at all likely to be witnessed. In the first place, more than a year of uninterrupted idleness in harbour is scarcely the sort of thing to rouse a Berserk spirit in officers and men. There was no manifestation of that much-advertised *furor Teutonicus* in the German sailors who fought in the Battle of the Bight, and at that time they were still fresh and confident. Moreover, Berserker tactics would be of little avail against the deadly long-range gunnery in which the British Fleet has shown itself to excel. And, finally, in spite of the brag and bluster of German arm-chair fire-eaters, and of their parrot-like repetition of the "ruthless offensive" shibboleth, the naval authorities in Berlin are not likely to sacrifice the flower of

their forces unless they have some clear-cut objective in view, and that a more promising one than a limited reduction of the British Fleet, which would still leave it in indisputable command of the sea.

The whole edifice of German naval policy having toppled over in ruins, those responsible for the disaster are, no doubt, hard at work on the thankless job of trying to devise an alternative policy. Much as the men of the Grand Fleet may long for their innings, the dominant fact of the naval situation is the total collapse of all Germany's naval schemes. Her Fleet may still be intact. If so, we have the singular anomaly of a State which, while still in possession of a huge and formidable Navy, has yet ceased to exist as a maritime Power. When Grand-Admiral von Tirpitz has grown tired of running his little Zeppelin and *U*-boat side-shows, we recommend him to spend an hour or so quietly digesting this truth, deriving what consolation he can from the momentary plaudits of the people he has duped.

HECTOR C. BYWATER.



THE SINKING OF H.M.S. "MAJESTIC"

[Daily Mail Photo

CHAPTER VI.

The French Navy in the War 1914-1915.

[Prepared by direction of the French Naval War Staff.]

AT the commencement of hostilities the French naval forces were distributed as follows :

In the Mediterranean, a fleet consisting of four squadrons, three of battleships and one of armoured cruisers, as well as flotillas of destroyers and submarines.

In the Channel and Atlantic, a light squadron, composed of armoured cruisers, to which were added, as well, destroyers and submarines distributed in several flotillas.

Away from home waters, there were :

In the extreme East and the Pacific two armoured cruisers, a small cruiser, and several torpedo-craft.

In the Atlantic half a dozen cruisers on the coasts of Morocco or Newfoundland and in the West Indies.

This distribution, which concentrated between France and Algeria the greater part of our naval forces, was not the result of chance, since it had already been in operation some years, and events showed that it was part of a well-thought-out plan. To obtain the command of the sea in the Mediterranean was our principal objective.

During the period of diplomatic tension, and even after the order for mobilisation, the Fleet, brought together under its Commander-in-Chief, awaited with feverish impatience the order to dash at the enemy. But, being above all things anxious to maintain a correct attitude, and zealous to avoid even the appearance of committing an act of aggression, the French Government, in the same manner as it kept our troops ten kilometres on our side of the frontier, restrained the ardour of the Fleet and its Chief, and kept it at anchor until the night of August 2nd-3rd.

Finally, on the morning of August 4th, the *Goeben* and

Breslau commenced hostilities by bombarding the ports of Bone and Philippeville, where, on the strength of information which proved incorrect, they hoped to destroy transports carrying troops.

The naval operations had commenced.

I. MEDITERRANEAN.

To obtain the command of the sea in the Western Mediterranean—and to obtain it immediately—was, to us, an imperative necessity, for we had, without a moment's delay, to ensure the repatriation of the French forces stationed in Northern Africa.

In times of peace, political as well as military reasons involved our maintaining in Algeria and Tunis, as well as in Morocco, an important contingent of active troops. The war which was beginning, against an adversary whose great numerical superiority was known to us, forbade our neglecting any of our forces. It had long been foreseen that the plan of mobilisation would demand the return to France of these active troops, and their replacement by formations composed of older classes, and the French Fleet knew that its first business was to assure the safety of a whole series of convoys. The enemy, it is true, might appear inferior, since it included only two units (the *Goeben* and *Breslau*), but, formidable on account of their speed and of the powerful armament of one of them, it was feared that they might surprise and sink some of our transports. The provision of a sufficient escort for each one was materially impossible and would have led to a too great immobilisation of our naval forces; furthermore, this war was to illustrate all the difficulties which are encountered, even with the advantage of numbers, in searching out and pursuing an adversary endowed with high speed.

The time has not yet arrived when it is possible to make public the plans adopted by the Commander-in-Chief to guard against this danger, but they resulted in the two German cruisers being afraid to venture an attack upon our transports, *a mission for which they had been specially sent to the Mediterranean*. Chased from the western end, taking temporary refuge in Messina, pursued by some big British cruisers, the *Goeben* and *Breslau* could make no use of their high speed except to flee and to reach Con-

stantinople. A squadron of British and French ships was shortly posted at the entrance to the Dardanelles, but in vain; no more were the two German cruisers to reappear in the Mediterranean.

During this time all the convoys were able to pass between Algeria and France in accordance with the prearranged plans, and the troops so brought back were able to take part in the battle of the Marne. In this way was carried out, without either incident or delay, a military operation the realisation of which had always been looked upon with grave preoccupation by the Higher Command, an operation whose importance can be judged from the fact that it involved upwards of 100,000 men.

Our ports of Provence were still filled with Algerian regiments when, in their turn, troops from the Indies began to disembark; the movements just concluded between our forces from France and from Algeria were followed by an exactly similar exchange between British troops from India and from England, an operation which, beginning then, was carried on through the whole winter. The direction of these operations in the Mediterranean was delegated to a French admiral, and upon him fell the burden of protecting the numerous convoys between Port Said and Marseilles. He was, however, assisted in this task by the British ships remaining in the Mediterranean, and so, from the very beginning, was manifested that close collaboration of the two Navies whereby, in every theatre of operations, all the naval forces at the disposal of the Allies, in view of the common task before them, are under the command of one and the same Chief.

In the spring the action undertaken against the Dardanelles involved the transport across the whole length of the Mediterranean of all the personnel and material required by the Expeditionary Force and by the Fleet. Until the time comes when the figures can be published, little idea can be formed of the number of voyages required for such a transport: troops, horses, heavy artillery, field-guns, aeroplanes, ammunition, *service de santé*, clothing, food supplies, forage and drinking water, all sorts of camp equipment, even down to firewood, lighters, boats, building materials, coal, petrol, etc., etc., and, coming back, the hospital ships and the transport of the wounded. So, since the very beginning of the war, the waters of the

Mediterranean have never ceased to bear upon their bosom an uncounted host of military transports. To France fell the task of watching over their safety; her task grows daily heavier, first from the increase of the number of ships concerned, secondly from the menace of enemy submarines; and it must be regarded as a happy result of the precautions that have been taken that we have only to deplore one or two serious accidents.

Though the most urgent need of the moment had been the protection of the transports of the Allied troops, the French Fleet did not forget that the destruction, by all available means, of the Austro-Hungarian squadrons was its principal objective. Against them the declaration of war by the Dual Monarchy, on August 10th, gave full liberty of action to our Grand Fleet, but the latter had not the joy of meeting its enemy and of forcing him to battle. Giving up all thought of disputing the command of the sea, the Austrian Fleet, like its German Ally, adopted waiting tactics and took refuge in Pola, sheltered by its forts and mine-fields. Our naval forces, penetrating into the Adriatic, found nothing in front of them except a small cruiser, the *Zenta*, which was surprised laying mines along the Dalmatian coast on August 16th, 1914. Its rapid destruction proved at least the efficiency of our long-range fire. To push on further and to attack the fortified refuge of the Austrian Fleet would have been advisable only if, after the successful conclusion of such an operation, the result could have been exploited in a manner commensurate with the inevitable losses. But this would have demanded the use of other than naval forces, and troops at that time were too precious to permit of their being sent to a theatre of operations which, after all, was only secondary.

The reply to the tactics of circumspection adopted by our adversaries followed as a natural consequence; seeing that they refused to seek a decision and preferred to remain out of action in the security of their ports, nothing remained to us but to impose that inaction upon them, to prevent their leaving that sea where they had sought refuge—in a word, to blockade them in the Adriatic.

A blockade! It certainly was not with lightness of heart that the French Fleet accepted a solution ill-suited to

our national temperament and possessing manifold inconveniences. Blockaded, but not reduced, the Austro-Hungarian Fleet could still, when occasion offered, attempt to force a passage, and, in the uncertainty in which we were placed as to its final intentions, we had to be sure that our ships were always there in force in the event, improbable though it might be, of an encounter. Now, a modern fleet has a never-ending need of replenishment and repair; and the necessity of dividing up our Grand Fleet into several groups which could successively replace one another singularly diminished our numerical superiority. Moreover, the geographical configuration of these coasts made it imperative that our blockade should be established in the Otranto Channel, far from our bases, the nearest of which was Malta, gracefully placed at our disposal by our Allies; and the journeys to and fro, with the accompanying fruitless loss of time, expenditure of coal, and waste of material, spread over many months, became a serious cause of weakness to our forces.

From this necessity for ceaseless patrol by a large number of our bigger ships, in order to be in force at the critical moment, arose risks which had not been unforeseen. But it was resolved to run them in view of the importance of the interests at stake; and in point of fact, though it is untrue that the *Courbet* has been torpedoed—not to say sunk—still we have to deplore the loss of an armoured cruiser, the *Leon Gambetta*.

Between whiles, we had also to ensure the replenishment of Montenegro under conditions often difficult; it was in the course of one of these operations that the destroyer *Dague* was destroyed by a mine.

In spite of these incidents, the blockade was maintained to the end. One may easily imagine what demoralisation, even in minds of the greatest stolidity, results from this long and tiring patrol in the same waters, this watch day and night at battle stations for an enemy which never comes, when to the possibility of a torpedo attack by night is added the menace of the submarine by day. This is why the French Navy has accomplished a work at once meritorious and useful, although it has been deprived of the supreme satisfaction of engaging, in the campaign of 1914-1915, in the battle for which it longed; and the same as their brothers in arms, reduced to inactivity in the trenches of

the western front, our officers and men preserved their good-humour and enthusiasm until the day when Italy came into the game and relieved them of their long, thankless, but effective duty.

However, all our ships did not leave the Adriatic, and one knows, by the success of the destroyer *Bisson*, which destroyed the *U3*, and by that of the submarine *Papin*, which torpedoed some enemy destroyers, that part of our naval forces are now co-operating with our new Allies.

But the fighting power of the enemy is not confined only to its ships of war, and to strike at it entirely it is necessary to annihilate every ship capable of being converted into cruisers or auxiliary transports—and these, thanks to the enormous development of her mercantile marine, Germany easily finds among the ships of her big steamship lines.

Many of them were in the Mediterranean at the outbreak of war. Since, in the absence of any rule universally agreed to, the German code permitted them to be transformed into fighting ships on the high seas, the patrols, immediately established, kept a close watch on them in case they left neutral waters. This precaution was all the more necessary since, in addition to the ships already recognised in times of peace as future cruisers, the event showed that among the apparently purely commercial ships then in the Mediterranean, many were concealing for several weeks military stores of all kinds destined for German cruisers and their Allies. The surveillance was effective, and of all these auxiliary ships none was able to fulfil its mission.

At the same time as these, some hundred of other ships found themselves blockaded in neutral ports where they had taken refuge, and did not come out.

Thus, from the very first, in the whole Mediterranean, ships of war, auxiliary ships, and merchant ships were all definitely condemned to inaction. In one day the German and Austrian flags disappeared from that sea.

To forbid the sea to the enemy's commerce has always been one of the objects of naval war. In the present circumstances, when the Allies find themselves surrounding and besieging the Central Empires, economic questions come to have a first-rate importance. To prevent the enemy from renewing his supplies of men, of contraband of war, and

of all materials necessary for his industry and even for his very subsistence, to stop the export of his manufactured articles which might mitigate his lack of credit abroad—when these became the principal objects of the war at sea it seemed that the sudden disappearance of the enemy's mercantile flag ought to strike at him a fatal blow. In reality it was not so. That which could not be done under the German flag was attempted under a neutral flag in virtue of the principle, The flag covers the enemy's merchandise with the exception of contraband of war.

From this point of view, the Mediterranean offered great facilities to the enemy; their great activity and their commercial cunning knew how to use this to the best advantage, and the result involved us in a thousand complications. Certainly the Straits of Gibraltar are narrow and are well guarded; but this was easy to get over by transit across the Iberian peninsula.

Moreover, the large number of peninsulas and islands allowed dangerous voyages to be made in small stages attempted at the most propitious moment. The great number of possible routes obliged us to establish different patrols to watch and cut these various commercial routes, while successive transshipments made it extremely difficult to find out the final destination of the goods. Finally our difficulties were still further increased by the number of countries which remained neutral and by their distribution round the Mediterranean littoral.

As regards men, while the Allies were able to receive—not without anxiety, but at the same time with success—incessant reinforcements from beyond the seas, Germany, too, was expecting a considerable number of reservists—several hundred thousands, it is said—whose arrival would to a certain extent have made up for the terrible losses in their army. But one has some difficulty in disguising his true nationality, although there are regular agencies for supplying false passports, and it was a relatively simple matter to us to stop them. Only an infinitesimal number got through; the rest turned back or remained in Spain.

As for merchandise, our adversaries' necessity of obtaining goods through neutral intermediaries gave the latter an abundant opportunity for profit which they made no effort to limit, and, the *mala fides* of shippers being coupled with indifference, sometimes even with the complicity of certain

Customs Authorities, the examination of papers and the verification of goods and their real destination very soon became an arduous and delicate task. This was the more the case in that we had to be most careful in dealing with the interests and susceptibilities of certain countries whose strict attitude of reserve towards us might not be definitive. In the exercise of this right of visit we had to avoid two pitfalls: on the one hand, not to damage, by inopportune delay and useless formalities, the interests of certain countries which, as the sequel has shown, might possibly range themselves on our side; and on the other hand, to be on our guard lest we should be made the victims of our own benevolence. In spite of a few inevitable protests, we can assert that in these matters France, faithful to her traditions, has always allowed herself to be guided by a high sense of justice, even at the risk of doing harm to her own interests.

As the resources of our mercantile marine were not inexhaustible, it was not without difficulty that we were able to organise those patrols for which were required, not warships, but light, quick merchantmen, specially armed for war. We succeeded, however, in obtaining them, and on the whole, in spite of innumerable and ingenious subterfuges intended to allay our suspicions and throw us off the track, our surveillance was at once active and efficient.

Although its principal care was the watch for the Austrian Fleet, the protection of the transports and commerce of the Allies, and the arrest of enemy contraband in the Mediterranean, yet this did not prevent the French Navy from taking part in the operations against Turkey. Our Fleet undertook these operations with all the more enthusiasm seeing that they were the only ones that could be really said to be of a warlike order—so rare, in this singular war, are the chances of seeing gunfire!

When, as a result of long and methodical preparation, the Syrian Army threatened the Suez Canal, France supported the defence with several ships that were specially suitable, and when the Turks attacked, on February 3rd, the guns of the *d'Entrecasteaux* helped to throw them back, while at the same time the big guns of the *Requin* smashed up their heavy artillery. Afterwards, in addition to several of these ships being kept in Egypt, certain of our torpedo-

boats were employed in patrolling in order to frustrate any attempt to obstruct the Canal by means of mines.

For the protection of the southern coast of the Isthmus of Suez, the *Montcalm*, which has been brought back from the Far East, has been placed at the head of some British light cruisers, and they also police the whole of the Red Sea.

To the north of Egypt, as Syria forms the natural route for attacking troops coming from the north, it was felt to be necessary to have in close proximity a naval force which could threaten the enemy's communications and be on the watch for any of those incidents likely to arise in a country where nationalities and religions were so many and varied. At the same time they could intercept the enemy's commerce and prevent this part of the coast from being used as a base for submarines. In order to accomplish this duty, which, for many reasons, naturally fell to France, a detached squadron of half a dozen of her big ships was sent to these waters. They carried out several effective bombardments, and their active and incessant patrol gradually suppressed the suspicious trade that was carried on on this coast. Ultimately a blockade was declared from Egypt to the island of Samos.

It must be mentioned also that the French Navy, besides, sent to Egypt and Syria a seaplane-carrier, several squadrons of aeroplanes, the services of which were much appreciated in reconnaissance and bombardment operations, and which supplied also a fresh proof of the collaboration of the two Navies, for the French pilots often took British officers with them as observers.

In the operations undertaken by England in the Dardanelles, France has, from the first day, joined her Ally. This co-operation has not been limited to sending only big ships for bombardment purposes; it has involved also a force of destroyers and a number of small fishing-boats specially fitted for mine-sweeping and for chasing submarines: our trawlers particularly were highly appreciated. In spite of all, success did not come up to our earliest hopes, and the *Bouvet* came to a glorious end, sinking by the side of the *Irresistible* and the *Ocean*. Operations had then to be resumed on a different basis with the landing of an Anglo-French Expeditionary Force. The collaboration of the two Headquarters Staffs and the two Fleets became even more close.

As is well known, under the protection of the Allied squadrons, the landing on April 25th was carried out with complete success. First the transport, and then the maintenance and replenishment of so many troops assembled on a narrow space of land and on a difficult terrain, presented a whole series of problems which could only be solved by using a large number of transports. In spite of the difficulties which the requisition of all these merchant ships involved, France made it a point of honour to supply, at least during the first months, all those which were necessary for her own troops. Community of organisation none the less existed, and as ships were needed or became available, those of the one side or the other were employed for the common service.

This co-operation extended not only to the neighbourhood of the Dardanelles but also to the various less important operations that were carried out on the coast of Asia Minor—operations in the course of which we lost a mine-layer, the *Casablanca*—and to the organisation of the defence against submarines, when the latter reached the Ægean Sea.

II. CHANNEL AND STRAITS OF DOVER.

If, in the Mediterranean, the direction of the operations, and more especially the protection of the transports, devolved upon the French naval authorities, in the Channel and Straits of Dover the responsibilities were shared in so far as concerned the pursuit of enemy commerce and the protection of the coasts.

In these waters military events were also lacking; the only one worthy of mention was a success for our arms: during the night of August 22nd, 1915, two of our destroyers, the *Oriflamme* and the *Branlebas*, met and destroyed, off Ostend, a German destroyer which was their superior from all points of view.

There, as elsewhere, the war rapidly turned into a commercial struggle. By patrols posted at each end of the Channel it was relatively easy to intercept the enemy traffic which still endeavoured to make use of this much-frequented route, but it was a task requiring patience and tenacity to maintain a vigilant watch for more than a year, in every season and in every kind of weather. Of all the ships stopped by our patrols the best known, on account of

the circumstances connected with her, was the *Dacia*, which, bought some time after the opening of hostilities from a Hamburg shipping company, endeavoured to resume under the American flag the trade for which she had been designed in time of peace. Our vigilance prevented the creation of a precedent which might have had serious consequences for the Allies, and, in point of fact, the attempt, having failed, was not renewed.

To turn to another point, we had, from the first days of hostilities, to police our coasts in a special manner so that British troops could be safely disembarked in our ports. After the arrival of "French's contemptible little army"—as the Kaiser in his pride dared to describe it—and of the reinforcements which followed it, one will doubtless recall the Imperial communication of February 8th, 1915, which announced the dispatch of the "New Army":

"England is preparing to send to France considerable numbers of troops and stores of all sorts. . . . We shall oppose them by all the means in our power."

Among "all the means" comprised in their reckoning, Grand-Admiral von Tirpitz did not count only on the torpedoing without warning of ships, either enemy or neutral, which adventured into the war zone. We evidently ought to expect attempts to be made against our ports, but it is no longer sufficient to guard against methods of warfare already known. The Germans gave new proof of their fertile imagination, when it was a question of inventing new engines of destruction, and it is only at the cost of an active and incessant watch, of continual patrols of torpedo-boats against submarines, of mine-sweepers against mines, and of special escort measures, that the safety of the transports approaching our shores, as well as those inside our ports, has been secured.

If the disembarkation of this enormous quantity of personnel and material was able to be effected without delay or untoward event, it is only right to add that the work of the French authorities was complicated by the fact that our ports never ceased to be extraordinarily congested.

The landing of the British troops was not the only task they had to fulfil. These ports also served as bases for the naval forces detached to their neighbourhood. Our troops landed there also, for important movements of the personnel of the French Army had sometimes to be effected by sea.

On the other hand, the deprivation of the resources generally provided by the rich regions in the vicinity and the occupation of our coalfields by the enemy, as well as the important military operations executed on that front, necessitated the furnishing of important supplies. These caused sometimes terrible congestion on the railway system of the north of France, the resources of which were already greatly reduced in the circumstances, and the necessity of relieving this congestion was a new reason for making use of sea transport.

There also had to be cleared from these ports thousands and thousands of men, women, and children, who, coming from Belgium and Flanders, found themselves chased from their homes by the wave of German invasion.

The task, then, was enormous, for it is needless to say that these ports had neither been laid out nor fitted with the machinery to cope with such an immense traffic, and sometimes it was little short of marvellous the way the disembarking of British troops and material was carried out with regularity and safety.

Without enumerating all the measures taken to defeat the attempts of the enemy, as repeated as they were various, it is known that one of the best means to cope with the submarines was the use of armed steam trawlers.

A great levy was made on our resources of this nature, and with success, for after having started on our Channel coasts this method of warfare, contrary to all the laws of nations, to torpedo by surprise and even without warning non-combatant ships, the enemy submarines presently found themselves unable to carry on their misdeeds. Of these attacks, it will be remembered that the first and most reprehensible was the torpedoing, happily ineffectually, of the *Amiral Ganteaume*, full of Belgian refugees only, for the most part women and children.

III. OUTSIDE EUROPE.

On the seas abroad, French ships co-operated equally well with the Allies.

From the first days of the war, the armoured cruiser *Montcalm* lent assistance to the Australian and New Zealand squadron in the operations undertaken to deprive Germany of her possessions in the Pacific. Thus she helped at the

occupation of the Samoan Islands (August 29th, 1914) as well as that of German New Guinea (September 12th).

Then, while the plans of the enemy's squadron, which had left Kiaochau before it was invested by the Japanese, were still unknown, she helped up to the end of 1914 in protecting British possessions in Oceania.

Meanwhile, two other ships detached to the Pacific, the *Kersaint* and the *Zélée*, had been put out of commission so as to use their personnel and material for the purpose of putting into a state of defence New Caledonia and Tahiti. When on September 22nd, 1914, the *Scharnhorst* and the *Gneisenau* appeared off Papeete, they found, thanks to the measures taken by the Captain of the *Zélée*, a vigorous resistance which surprised them and prevented them from coaling there as they had intended.

Proceeding towards the north, the *Montcalm* assisted in the escort of the numerous convoys which, until the spring of 1915, continually crossed from the extreme East and India to Europe, and, in case of need, lent her support to the British authorities for several police operations rendered necessary by events in the Malacca peninsula.

It was in these latitudes that we lost a destroyer, the *Mousquet*, surprised, together with the *Iemtschang*, at anchor at Penang, thanks to the use of a false flag.

In the Atlantic the same campaign was pursued, defensive against the efforts of hostile patrols and offensive against German colonies. The *Condé* and the *Descartes* were attached to the Naval Division which was watching the Caribbean Sea—a surveillance which, even after the destruction or disappearance of German cruisers and auxiliary cruisers, had to be continued to prevent the escape of the numerous liners and merchant ships which had taken refuge in American ports.

On the African coast, besides the ships maintained off Morocco, others assisted in the operations against the German possessions in the Gulf of Guinea. A small gunboat, the *Surprise*, took a brilliant part in the attack and occupation of Cocoa Beach (Cameroons), and later on was succeeded in that region by more important ships: *Bruix*, *Pothuau*, and finally the *Friant*, which took part in the blockade of that coast.

IV. PARTICIPATION IN THE LAND OPERATIONS.

But it is not only at sea that the French Navy has shown its activity.

Already, in the course of the colonial campaigns and in the overseas operations in which it had taken part, the French Navy had often been obliged to extend its operations to the land; Mexico, China, Tunis, Tonkin, Madagascar, China again (1900) gave it at different periods of its history occasions to prove its worth. During the war of 1870-1871, in face of the necessity of reinforcing the army, France called on her sailors. They distinguished themselves in the defence of Paris, as well as at Bourget and in the Armies of the Loire and of the North.

Confident, then, in the memories of their past history, it was decided, from the beginning of the present war, to utilise our abundant reserves of naval ratings, and thus was constituted a naval brigade of two regiments of marine fusiliers, to which was added a group of machine guns. After having taken part at the beginning of September in the operations before Paris which commenced the battle of the Marne, this brigade was, at the time of the famous "race to the sea," sent to the north to prolong our line in Flanders. In October-November it took an active and glorious part in that battle of the Yser when the enemy, hypnotised by hatred against England, attempted by a gigantic effort to pierce our line and push a way through to Calais. The brigade behaved splendidly, but at the price of terrible losses. But finally success was attained; the enemy were not able to pass. In the course of this heroic resistance, the brigade took rank at once among the best troops, and received shortly afterwards from the hands of the Minister of Marine the flag on which will be inscribed for ever the names of Dixmude and St. Georges. At the other end of our front, the fortresses which at the end of August served as pivots for the French army were given naval guns manned by naval gunners to help them against the heavy German artillery which was bombarding them at long range. Their services were greatly appreciated and contributed largely to stop the innumerable attempts made by the enemy to invest Verdun.

Still further help was rendered by the Navy to the army

ashore. When the great importance of material in the war first manifested itself, one turned naturally to a body of men familiar with the working of mechanical gear. A number of weapons used on board, quickfirers, small-calibre guns, machine guns, and searchlights, were mounted on motors, and now one finds, scattered all over the front, groups of motor guns and motor searchlights entirely manned by sailors.

Other assistance was still forthcoming from the Navy. When it was seen, after the victory of the Marne, what an appalling quantity of projectiles a modern battle demanded, when France realised clearly that it was a question of life or death for the Allies to know whether a sufficient quantity of munitions could be manufactured, and when for this purpose the very best use was made of all the industrial force at the disposal of France, all the arsenals and naval establishments took part in the common work and helped to diminish the enormous difference in the supply of munitions which weighed so heavily on us in our fight with Germany.

Thus even on land the French Navy found means of employing that reserve of force which the course of events did not permit it to employ at sea, and one can well say that, in these terrible happenings, when the safety of the country demands the work of all, there is not a force that is not being used, or directed to any other end than the triumph of the cause of the Allies.

V. CONCLUSION.

By the foregoing one may see that the French Navy has never ceased to perform effective work on every sea and even on land, at some points directing operations, at others merely bringing its assistance to the help of its Allies. It is true it has appeared in no brilliant actions, and public opinion has, perhaps, been somewhat deceived in its expectation of sensational events. The action of the French Navy has, none the less, made itself effectively felt, although in different wise from what was anticipated, so much has this war upset all the theoretical ideas elaborated during times of peace.

From the very beginning, actual battle has given place to a warfare of commerce, since the question of the replenish-

ment of the Central Empires became of capital importance : cotton, copper, contraband of war, transit through neutral countries, such were the matters which, in the minds of maritime authorities, took first place. It was an unceasing struggle on every commercial route, and for its organisation we had to supplement our ships of war, all of which were in use, by those of our merchant fleet that were capable of being armed for various purposes. Unfortunately our resources in this respect were quickly exhausted.

In adapting itself to this new aspect of naval warfare, the French Fleet adequately filled the part that had been assigned to it, and right from the beginning accomplished its principal mission, which was to obtain and to keep command of the sea in the Mediterranean.

Undoubtedly it was the assembly in the North Sea of the various British battle-fleets which permitted us to concentrate at Toulon and Bizerta nearly the whole of our naval forces. But, on the other hand also, it was thanks to the latter that England, leaving in the Mediterranean only ships of the second line, was able to rely on the route to Egypt and India being safely kept open. This mutual confidence has proved itself to be well placed : while in the north the German Fleet is, in effect, annihilated, in the Mediterranean the route to the East is kept open for the Allies' commerce as well as for their transports, for the replenishment of their Fleets as well as for their operations in the Dardanelles. These were inestimable advantages which were not at the time entirely evident, because we possessed them without a contest ; but their importance can be easily realised by considering in what a plight their loss would put us.

Thus, while England barred against our adversaries the maritime routes of the north, France accomplished the same task in the Mediterranean, which formed their southern outlet. That this plan could be carried out exactly as it had been agreed upon, proves that it was well suited to the capacities of our respective naval forces. There is indeed in it nothing but an intelligent division of work, although our adversaries *do* pretend to the possession of a monopoly of the power of organisation. Let us add, also, that not once in the execution of this plan have any of those unfortunate incidents arisen which crop up too frequently between allies to the offence of their *amour-propre*. It is

well to quote this fact, for it is greatly to the honour of both parties.

Thus our Navies are acting always in the closest agreement. Even when their ships were not side by side their operations formed only the different parts of the same plan, and all their forces, even when they appeared separate, were united in the same thought, animated with the same spirit, and were working with one accord at the common task in view, of the triumph of Right and of Civilisation.

CHAPTER VII.

The Russian Navy in the War.

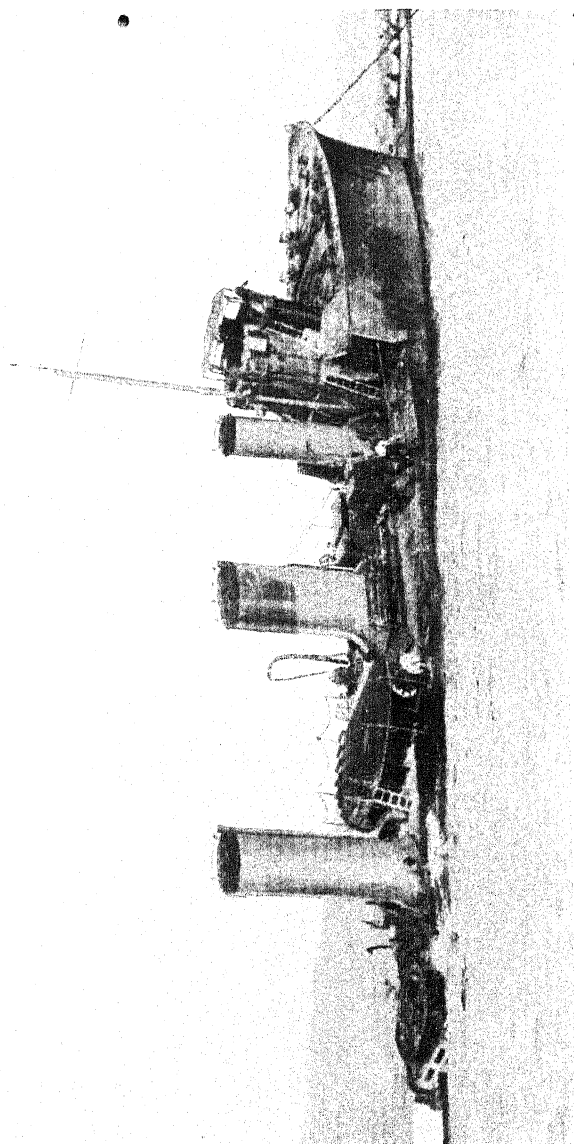
AFTER the war of 1904-5, Russia, as a whole, was ill-content with her Government's Eastern policy and had entirely lost confidence in the men responsible for it. The representatives of the country in the First and Second Duma reflected the feeling of the nation in regarding a strong Navy as a temptation to embark the country in new political adventures and, on this account, refused to confirm any Estimate for the construction of new men-of-war.

The naval personnel itself seemed to lose its mental balance, more perhaps on account of the disorders in the Fleet which followed the disastrous war than by the defeat itself. A large number of the officers pinned their faith entirely to submarines, and the naval authorities were inclined to support them on the score of economy.

Fortunately the theory of a mere coast-defence Navy—"one of the *heresies of Sea Power*," as Jane terms it—was soon abandoned, and the construction of four battleships was entered on in 1909, and the Duma two years later approved of the Estimates for a revival of both the Baltic and Black Sea Fleets. These Estimates provided for a squadron of eight battleships in the Baltic, with a corresponding number of cruisers, destroyers, and submarines, as well as for the construction of new dockyards and wharves, the transfer of our naval base from Cronstadt to Reval, and the fortification of the latter port.

The completion of this programme was arranged for 1920, the whole work of construction being begun in 1912.

In the meantime the Baltic Fleet, consisting of some old battleships, cruisers, and destroyers, was regarded as nothing more than a school for seamanship, gunnery, and torpedo practice, thus furnishing an opportunity to the naval personnel for learning and elaborating naval tactics.



[Photo, Sport and General

DISMANTLED WRECK OF H.M.S. "LOUIS"

Advantage was taken of the experience of the recent war ; the yearly period during which the ships kept the sea was greatly lengthened, and some very important changes were introduced in the organisation of the Admiralty and the naval ports.

In 1909 the Baltic Fleet and its bases were placed under the orders of Rear-Admiral Essen, who had distinguished himself during the recent war whilst in command of the light cruiser *Novik* and the battleship *Sevastopol* at Port Arthur. This choice proved to be a happy one. The young admiral possessed a strong character, was the most popular officer in the Russian Navy, and in addition was a good sailor and clever organiser. His command in the Baltic was eminently successful. Without parade or undue superfluity of words he worked hard to find the best road to full efficiency. His great and beneficent influence over his subordinates was due to his genuine and fervent enthusiasm, his clear insight into military questions, and his sound common sense.

Admiral Essen died suddenly of pneumonia in May 1915, and his loss was a real disaster for the Russian Navy, equalling in importance that of Admiral Makaroff in April 1904 at Port Arthur.

Fortunately Admiral Essen had time in which to create a school of successors. Men, not ships, are the essence of every Navy—men and their leaders—for they hand down naval experience and traditions and inspire those who succeed them to new acts of heroism. The experience of 1904-5 has not been lost, for the Russian Navy and the small Baltic Fleet of 1914, in spite of its great inferiority in numbers, proved to be a serious obstacle to Germany's sovereignty in the Baltic Sea.

At the beginning of the present war the rôle of the Baltic Fleet was regarded as a very modest one : its task, in case of a sudden attack by land and sea on our western front, was to oppose the contemplated supremacy of the German Fleet in the Gulfs of Riga, Finland, and Bothnia, thus gaining the time necessary for the mobilisation of Russia's armies.

The first German blows were, however, delivered to the west ; and in the Baltic Sea all naval operations were restricted to submarine actions, mine-laying operations, and mutual raids of light cruisers and destroyers to the enemy's coast. The losses sustained by both adversaries in

1914 were comparatively insignificant. The Russians lost the armoured cruiser *Pallada* and two destroyers; the Germans the light cruiser *Magdeburg* and, as we know, at least one armoured cruiser and three destroyers. During the winter four battleships with twelve 12-in. guns each were added to the Russian Navy. But the position of naval affairs in the autumn of 1915 was entirely different to that of the past year. After stubborn fighting the German and Austrian armies have succeeded in taking Poland and the southern portion of Russia's Baltic provinces, though the enemy's project of enveloping and destroying the Russian armies failed entirely in execution. The latter, in September 1915, have taken up a more direct line of position, running roughly from Riga in the north to the lower Dniester and its tributary the Sereth in the south. So long as both wings are secured from being enveloped by the enemy, the further resistance of the Russian armies will not weaken, although they may be forced to fall back still farther east and north.

The Baltic coast may prove to be either a powerful aid to the very important Russian right flank or a dangerous trap enabling the enemy to envelop this wing and to force it to still further retreat. Everything depends on the command of the sea.

The German Fleet realised this, and resumed early in August 1915 a more offensive strategy in the Baltic. Some of its cruisers, destroyers, and mine-sweepers, supported by battleships, were sent north, in order to clear the entrance into the Gulf of Riga. Relying on its superiority, the German Fleet was so confident of a rapid success that it did not hesitate to take troops and transports with supplies to land in the rear of Riga.

Thanks to the vigilance of the Russian Fleet, this expedition completely failed: it is true that the German ships succeeded in entering the Gulf of Riga, but after stubborn fighting they were forced to retreat. The transports, together with several cruisers, submarines, and destroyers, were sunk, while the Russian Fleet only lost two gunboats of small importance. At the same time one of the British submarines which were co-operating with the Russian Navy torpedoed the German battle-cruiser *Moltke*.

This was an excellent beginning. The main fight in the Gulf of Riga was between small craft—light cruisers,

destroyers, and gunboats; but behind them, outside the Gulf, were the battleships, and if these ships did not join battle it was through fear of mines and torpedoes: the latter can have no better opportunity of proving their value than when the enemy obstinately clings to a fixed position.

The first German failure in the Gulf of Riga was not immediately followed by any further attempt to establish a naval command in the Baltic.

Will the German Fleet rest finally satisfied with the blow delivered by a much weaker enemy? In all probability, no. The German military objective is too important, its superiority of naval force too considerable, and—I believe—the need of some rapid success too great, seeing that winter may soon arrest all German offensive action in the north of Russia.

Since 1914 the Russian Baltic Fleet has largely increased in numbers; its losses are certainly much inferior to those of its enemy, but the latter is still nearly five times as strong as our small Baltic Fleet, opposing twenty modern battleships and twenty *pre-Dreadnoughts* to Russia's four of the former and four of the latter, besides possessing an immense superiority in cruisers, torpedo-boats, and destroyers.

The naval offensive in the Baltic will depend on the strategy of the German armies; it will also depend on the main objective of the enemy on his eastern front, and largely on the strategy of our Allies on the western and southern fronts; last, but not least, it will depend on the strategy of the British Fleet.

In the meantime it is necessary to emphasise that the strategical position of the Russian Baltic Fleet is most favourable; that it is fighting near its own naval bases; that the conditions of navigation of the northern part of the sea are extremely difficult for the enemy; that the latter's rear is not protected against the naval forces of Russia's Allies; that the British submarines have proved their quality by destroying some of the most powerful German ships in the Baltic, while Russian sailors know that their lives will be avenged by the Allied Navies.

In the Black Sea the task of the Russian Navy has been less difficult. The majority of the Turkish ships were of an old type, while the few modern ones were not strong enough to contest the command of the sea. The German-

Turkish battle-cruiser, *Goeben*, which was superior to any single ship in the Russian Fleet both in speed and armament, was badly damaged in its first encounter with our squadron : after undergoing repairs, she struck a mine near the mouth of the Bosphorus and has never since been seen in the Black Sea. Her full recovery seems rather doubtful. The smaller Turkish cruisers and destroyers attempted some further raids, but were repulsed with heavy losses : the *Medjedieh* struck a mine and foundered in the Gulf of Odessa ; the *Breslau* was checked and damaged by our destroyers ; and some of the Turkish smaller craft were lost in the same way in naval skirmishes. The old Turkish battleships have never dared to leave Turkish territorial waters, and some of them have been recently sunk by the brilliant exploits of British submarines in the Sea of Marmora.

The losses of the Russian Black Sea Fleet were insignificant, no battleship or cruiser having sustained any serious damage. An old gunboat of 1887, the *Kubaniez*, and the still older transport ship *Pruth*—constructed in 1879—were sunk on the first day of the war by destroyers. In the meantime some of the new ships laid down in 1912 were completed and joined the Fleet, which is now much stronger than it was in 1914.

During the war the Russian squadron has destroyed the Turkish harbours of Songuldack, Eregli, and some other points of smaller importance on the coast of Anatolia—the coal-mines of Songuldack being the main source of supply to Constantinople and to the Turkish Navy. The destruction of this harbour, together with a great number of transports and steamers by Russian destroyers and submarines, was an exploit of some military importance. Turkish shipping in the Black Sea has been practically annihilated, and the Russian armies in the Caucasus have been supported and partly supplied by sea.

The main object of the Russian Black Sea Fleet having been attained, its sailors and officers are both equally anxious to help their gallant Allies in the Straits. But an attack on the Bosphorus would be in vain without the support of considerable land forces—and, at the present moment, these forces can hardly be spared elsewhere.

Still it is rather a question of material than men, the men being ready at any time to sacrifice everything for the great aim of unlocking the Straits and destroying the

enemy. The feeling of sailors and officers in both Russian Fleets are one with that of their country—the whole of Russia. The war has to be won at any price. To secure the common cause of Russia and her Allies no work is too arduous, no strain too intense, no sacrifice too great.

NOTE ON RECENT DEVELOPMENTS IN RUSSIAN NAVAL WARFARE.

Since September last, when the foregoing article was written, the position in the Baltic Sea has changed much to our advantage. The German Fleet has made no further attempt to fight for the command of that sea, nor did it risk another attack in the Gulf of Riga. The co-operation of our ships in the Baltic has given a substantial support to the right flank of the Russian armies on the River Dvina. The enemies' attempts to outflank our troops to the west of Riga were severely punished by joint action of naval and field artillery. After stubborn fighting in October and early November the enemy was driven back from the coast; our Fleet—old battleships, destroyers, and gunboats—have taken part in these operations by conveying troops and supplies and bombarding the enemy.

The passive attitude of the German Fleet during these very important operations was certainly the result of many causes. One of these may have been the fear of sacrifices unavoidable in any naval offensive; the threat of the ever-growing power of the British Grand Fleet, of a possible invasion from England, the forcing of the straits, or any other resolute action of this silent enemy, may have been another cause; last, not least, the daring activity of the British submarines in all parts of the Baltic Sea. This was perhaps the chief reason.

The splendid exploits, the most gallant deeds of these submarines are not only appreciated—they are admired by the whole Russian Navy; the Russian Baltic Fleet is immensely proud of these Allies. The sinking of the German cruisers *Prinz Albert*, *Undine*, and one destroyer, the destruction of more than twenty steamers conveying ore and supplies to Germany, the temporary stopping and serious endangering of all German trade in the Baltic, is another direct result of this most successful campaign. Its

indirect results, less obvious perhaps for the man in the street, may be of still greater importance; the serious impression produced in Germany by cutting off her vital communications with Sweden is duly demonstrated by many indirect signs, one of which may be the recent changes in German naval command; the demonstration of British naval power in the Baltic Sea, the obvious success of its combined actions with the Russian Fleet, may prove a useful factor in preventing inopportune neutral intervention in the north at a time when a certain delay in the south might influence those favourable to such action; for the Allies themselves it may be a useful demonstration of an important truth which is easily forgotten and often contradicted: a resolute offensive is always good.

For Germany the Baltic Sea is not only the most important—it is her most vulnerable theatre of sea-war; and to apply the right force at the right time in the right place is another excellent rule of which the splendid activity of our Allies in the Baltic is the best illustration.

The Russian Fleet in the Baltic is most confident of the present position and looking with confident hope to the future.

In the Black Sea the position of our Fleet is still improving. New ships are being put in commission, whereas the Turkish Fleet has no sources of possible increase.

The participation of Bulgaria on the side of our enemies does not influence in any way the superiority of our naval forces in the Black Sea. But the aims of our Fleet, the task it has to accomplish, are greatly influenced by the new position in the Balkans.

Future operations not being the theme of this short review, I am bound to restrict myself to a consideration based upon the history of our wars with Turkey in the eighteenth and nineteenth centuries. In these wars the coast of the Black Sea, including that part of it which now meets the coast of Bulgaria, was nearly always the scene of combined naval and military operations. Such operations were nearly always extended into the mouth and lower course of the Danube. The present situation is complicated by the neutrality of Rumania. These are the important factors to be considered in any further plans of our Fleet in the Black Sea. It may be added that if historical traditions have something to say to the develop-

ment of impending events—and they certainly have in questions regarding all military operations—we may expect the most vigorous and efficient action of the Russian Fleet in the Black Sea, both on its coast and on the rivers which are accessible to naval forces.

AN OFFICER OF THE IMPERIAL RUSSIAN NAVY.

CHAPTER VIII.

The Italian Navy and its Attitude towards the War.

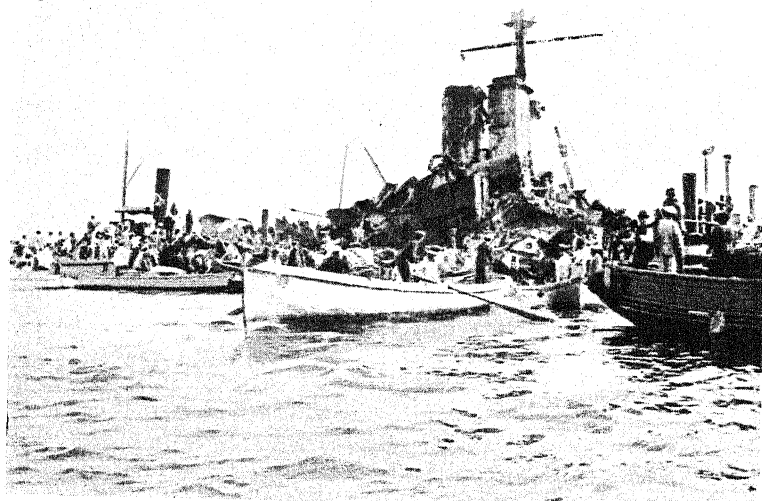
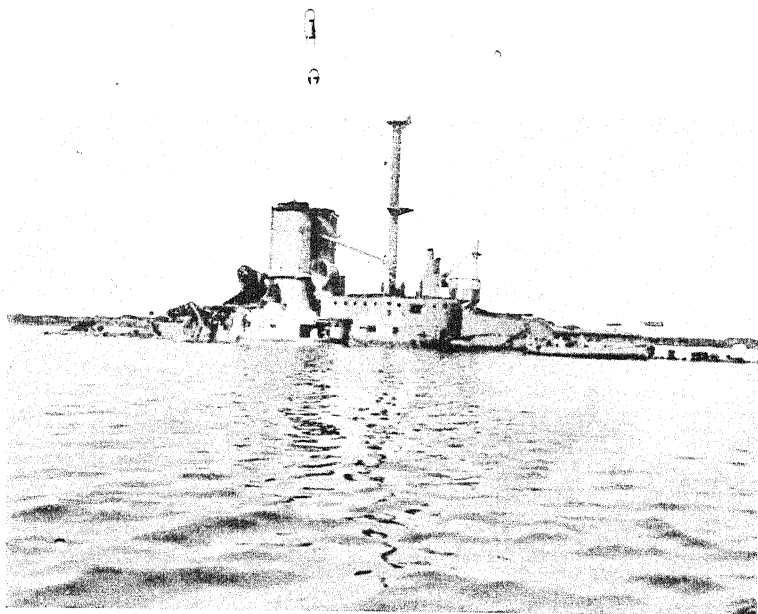
TWO reasons made it a debt of honour for Italy that she should take part in the European conflict: first, she could not accept the humiliation of any compensation whatsoever as her price of neutrality, lest on the restoration of peace she might be accused by her enemies of having meanly taken advantage of the critical situation, without running any risk; second, it was imperative that she should oppose Teutonic arrogance and champion the rights of nations. It would have also been repugnant to Italians themselves to declare war against an already exhausted enemy. Instead, we entered into the conflict at precisely the moment when Austria, aided by her ally and master, began that fortunate counter-offensive in Galicia, which to-day has led the armies of the Imperial Allies to the invasion of Russian Poland and even beyond it.

Hence Italy has fully satisfied her national sense of honour in taking her place beside England, France, Russia, and Belgium.

The warlike task Italy had set herself was rendered almost impossibly arduous and difficult by the very nature of her eastern boundaries, both by sea and land.

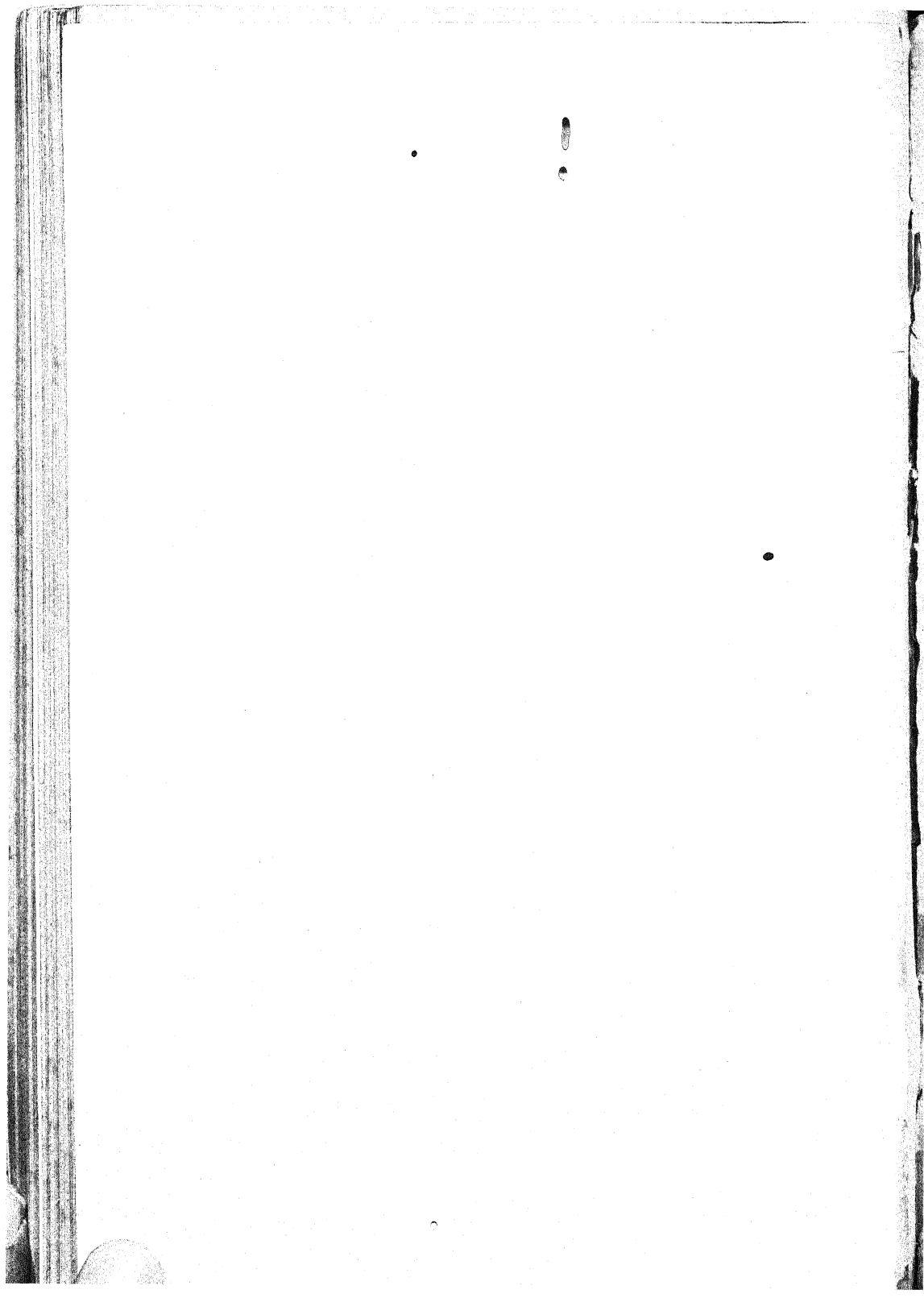
LAND BOUNDARIES.

On land the Italian confines ran at the foot of precipitous mountains, whose summits and slopes bristled with formidable enemy fortifications. But to-day things are no longer thus: in three months of war we have assured to ourselves frontiers much stronger, strategically, which permit us to conduct with greater security a methodical war of invasion



THE "BENEDETTO BRIN" DISASTER

[Copyright Photos



—slow, by the mountainous and woody nature of the territory engaged, but sure, in that it has always gone forward without once turning back.

SEA FRONTIERS.

By sea, the Adriatic separates us from Austria—the Adriatic, which the poet called “bitterest of all seas” for us, not only because that for long years a systematic work of strangling the Italian national spirit has been carried on in the lands that border that sea, but also because to the Dalmatian coast nature has conceded every advantage of bays, gulfs, islands, and deep waters, and has denied each of these advantages to the low Italian strand which unbrokenly and monotonously descends in a gentle slope to the sea.

THE COMMERCIAL SITUATION OF THE ADRIATIC.

Whoever glances at the map of Europe must recognise that the Upper Adriatic, forcing itself more than any other sea into the very heart of Europe, has all those characteristics of position and hydrography which are necessary to make of it a great centre of commercial gravitation—and such it was in fact until the Venetian Republic ruled alone over this sea.

But when Venice decayed Italy remained still oppressed by stranger-hordes and lamentably subdivided into insignificant States, badly governed and abominably robbed; Austria, facing her in the Adriatic, made no attempt either to revive the commercial splendours of the ancient Republic or to extract an economic value from the privileged position of the Adriatic; thus the great traffic of this sea disappeared inexorably and only the many-coloured sails of the little fisher and cargo boats remained to furrow its surface.

And when Italy rose into being as a nation and maritime energy awoke in the Dual Monarchy, it was already too late: in the north of Europe, on inhospitable coasts, amid the fury of tempests, in mists and fogs, in spite of hydrographical difficulties, in a rigorous climate, the tenacious industry of peoples, forced towards the sea, made ports arise from the water, ample, safe, filled with every means necessary to attract and facilitate maritime

commerce. These new ports accentuated still more the decadence of the Adriatic and delayed and made more difficult every possibility of resurrection.

These are the actual economic conditions of the Adriatic.

THE STRATEGICAL CONDITIONS OF THE ADRIATIC.

But if, from various reasons, the commercial position of the Adriatic is about equal for the two greater nations which there face each other, the strategic situation is very different.

In the western part, the coast is generally low, hence it is unfitted for a strong defence unless recourse is had to costly expedients; no gulfs or bays break its coastline, hence it is destitute of harbours; and above all, the conditions both of land and water indispensable for the creation of naval bases are absolutely lacking: the waters are shallow and are constantly silted up, so that continual dredging operations are necessary: the nature of the soil, which is composed either of sand or of a kind of argillaceous conglomerate, and the shallow water, makes of the western Adriatic basin an excellent place of ambush for enemy submarines; the wash of the currents brings to our coasts all that which the opposite shore has given up, from which reason under-water drifting mines, or mines which have broken their moorings, come, sooner or later according to the season and the winds, but come without fail, upon our shores. Why, even the sun is strategically against us. If, for instance, a naval force left the western coasts, in order not to be seen, by night, with the object of making an attack at dawn—the hour most propitious for surprises—on the eastern coasts, the attackers would have the sun in their eyes, while those who might be watching or moving on the Dalmatian coast would have the sun behind them.

Other conditions are unfavourable to us, though they do not belong to strategical factors, but to psychical ones not less important:—our simple and expansive nature, which often places our heart on our lips and leads us easily to confide in others;—our sentimentality, which makes the profession of spy opprobrious to us—wherefore we talk too much and with all and sundry, while everywhere swarm spies, towards whom our laws are kind and our judges lenient. In Austria, on the contrary, the perse

cution against all that is Italian is inspired by a suspicious cruelty, so that our Irredentist brothers, to-day, are only for us a painful preoccupation.

All the strategical conditions, then, which the Adriatic Sea creates, in the 665 nautical miles along which runs the Italian coast in this sea, are against us; not one is in our favour, all are against us. Not only so, but these strategical disadvantages are rendered still graver when confronted with the eastern coast. Here the mountains often end in precipitous cliffs on the sea-coast, and between these lofty promontories run deep gulfs, and almost land-locked bays, to which narrow canals alone give access. Nature herself provides ample harbours, easily and formidably defensive, converted easily into powerful naval bases. To protect which still more, a screen of islands extends along the whole of the Dalmatian coast, forming an intricate network of canals which render an approach to the coast extremely dangerous in war-time, a mass of ambushes and traps,—a screen behind which, by interior passages, the fleet of the adversary can securely and secretly separate into units. The sea which laps this coast has a bottom of a rocky nature and usually very deep, so that those of our submarines which desire to operate in that quarter have to keep up an incessant motion while submerged, with very great discomfort to the crew, consumption of fuel, and waste of material.

And these two coasts—one so poor, the other so richly endowed with strategical advantages—are only seventy marine miles apart.

From these strategical conditions what results? First, our coasts are completely exposed to bombardments. It is true that, with the exception of Venice and Brindisi, all the Italian cities which are washed by the Adriatic lack defensive works, in fact they do not even possess one cannon. This fact, however, did not save them from the incursions of the adversary, which, following the theories of its ally and lord, does not respect the articles of International Law.

The chain of islands which extends along the Dalmatian coast permits the Austrian ships to leave from that point of their own coast nearest that portion of the opposing coast which they wish to attack, to arrive in less than three hours at the point designated, and in another three hours

to be secure in their own base. This evidently renders it very difficult for our own ships to repeat a similar operation to that performed in the North Sea by the squadron of battle-cruisers, commanded by Admiral Beatty, when, on June 24th, he succeeded in surprising the German division of battle-cruisers and inflicting on them grave damage and the loss of the *Blücher*. Between the German and English coasts lie hundreds of watery miles and between the Italian and Austrian only tens: and yet even the hundreds of miles were insufficient for the completion of the action of the British ships. If, for example, the enemy, which travels at 20 knots, is sighted at a distance of 10 miles, to overtake him in a distance of 200 miles it is enough to have an excess of velocity of a little more than a knot an hour; but in a distance of 60 miles, the excess of velocity must be at least 4 knots an hour.

Nor is it necessary that the enemy ships return to the same points of the coast from which they set out. Ships that sailed from Sebenico, for instance, may re-enter by a large number of different routes, or they may go to Pola, Spalato, Zara, in the Quarnarolo, or put themselves in safety behind the Curzolari, or enter at Cattaro. Instead, our ships can only go out or come in from Venice or Brindisi. It is clear how all this constitutes a very great advantage for Austria, a real disadvantage for us. Should we wish to lay snares for the enemy ships, we should be compelled to disseminate mines and submarines on every point of the enemy's coast. Austria, with a much smaller number of these arms, can strongly threaten the movements of our ships. And we have already said how much more easily the submarine can lie in wait on our coasts than on those of our enemy.

These are the strategical conditions that the Adriatic—bitterest of seas—imposes on us, conditions barely understood by the man in the street, but evident to any one who has studied naval affairs. We have wished to mention them here for a more complete and clear comprehension of the events which we shall summarise.

THE CONDITIONS OF THE ATTACKER.

But, to better illustrate these, it is necessary to lay brief stress on some characteristics of modern naval war

which spring to view from a rapid examination of the events that have taken place in the various theatres of European action. It would be superfluous to lay stress on the fact that the precision of fire of modern artillery, the protective systems of ships against the attacks of cannon—practically equal in all navies—have discouraged naval battles if the disproportion between the combatant fleets should surpass a certain limit. Such a disproportion, more or less accentuated, exists, in fact, between all the belligerent fleets, and has compelled those less powerful to blockade themselves in their own naval bases. But, in the meantime, the submarine and the submerged mine, which have made an effective entrance into modern warfare, have forbidden the strongest fleets to blockade effectively their adversaries in their bases.

And these new arms have not only had this effect, but they have shaken to their base some hoary aphorisms of the art of naval warfare. One used to say, for example, before the outbreak of the present war, that the attacker has always a decided advantage, because he imposes the conditions of time and often of place, because he compels the attacked to subordinate their action to the plans of the enemy, because, in fact, he acquires that moral predominance which necessarily is affirmed in favour of him who attacks over him who defends.

Can one to-day accept this point of view?

The snares of mines and submarines give to-day to the attacked advantages which not only counterbalance, but in many cases surpass, those which, till now, were recognised as belonging to the attacker. The latter must, by the very nature of his action, approach the enemy waters and remain sometimes relatively close to the hostile base. In other words he is compelled to keep his ships at sea, leaving them, however, exposed to the dangers of mine-fields and, above all, to the attacks of submarines, risks which the attacked does not have to meet, since he remains in wait.

From this it happens that both England and France, though much stronger than their adversaries on the sea, have suffered greater losses in the respective theatres of war.

THE EXTENT OF THE BASIN OF OPERATIONS.

And, judging from facts, it is not only the action of attacking that augments the risks and losses, but also, and perhaps in greater measure, the extent of the theatre of operations.

Before Italy joined in the conflict, the theatres of European action were the North Sea, the Upper Central Mediterranean, and the Straits of the Dardanelles.

The last is the narrowest, then comes the North Sea; the Upper Central Mediterranean the most extensive. But the losses of and damage done to the warships are in inverse ratio to the extent of the basin of action: the heaviest losses are in the Dardanelles, the lightest in the Central Mediterranean; the North Sea occupies a medium position in the scale.

This is manifestly due to the fact that mines and submarines have freer play against ships constrained to act in a limited space. Certain other factors may have had their own influence on these results; but there seems to be no possible doubt that the extent of the basin has been a predominant factor. It may be noted that the Adriatic, so far as regards extent, is placed between the Dardanelles and the North Sea.

THE HISTORICAL NECESSITY FOR THE WAR: THE NAVAL TASK.

It seems to us that we have now clearly demonstrated under what arduous conditions our sea-war against Austria must be carried out. But also by a logical connection it appears to us that one of the historical necessities of our war has been demonstrated. One cannot, in fact, live securely in one's own house when one's own frontiers are lying open to the enemy; when the latter dominates on land from mountain heights and on sea from a neighbouring coast, gifted with every strategical advantage. And Italy, forced by necessity to aim at a fruitful period of peace, has for thirty years suffered an alliance which amounted practically to a state of vassalage, of which one of the most tangible signs was precisely that of having its eastern frontier open and continually menaced; and safety in one's own territory is the first of indispensable factors

to the normal development of a people's life. We are fighting to attain such a security, and in this fight we give our contribution to the forces of our Allies in order to beat down the arrogance of the militarism of the two Empires which are allied to the detriment of all the other European States.

If we consider our own action independently of that of our Allies, the decision of our conflict with Austria lies on land. The Fleet, either by the moral effect of successes obtained over the adversary, or, under certain conditions, co-operating with the armies, can contribute to a victory but cannot determine it: defeat of the Fleet would certainly have great influence on the conditions of peace, but it would not determine the conflict, the issue of which depends entirely on the Army.

If, however, our action is connected—as it is in fact—with that of our Allies, then the naval war assumes a greater importance: its special task becomes that of blockading the enemy's maritime commerce and blockading its fleet.

So long as the Fleets of the Allied Empires remain shut up in their strong bases, the fighting which has happened or will happen at sea is and will be purely episodic. It is however our opinion that the main issue of the conflict depends actually on sea-fighting; because it appears to us that the true and recondite reason of the European War of to-day has become the hegemony of the seas. "*Has become*," we say, because the war was not proclaimed for the conquest of the hegemony, any more than for nationality: the cause of the conflagration—futile as compared with the terrifying grandeur of the phenomenon—has developed, transforming itself into truer reasons, has revealed motives more vast.

Without the intervention of Great Britain in the conflict the war would have been a fight of races, of nationality; but with Great Britain it has arisen to a larger significance—that of a fight for the hegemony of the seas, the vain Germanic dream. And this is not conquered by submarine episodes; it rests on the power of the fleet in cannon and armour, because, even to-day, after the advent and confirmation of the submarine and mine, there still remains the armoured ship, which, however far it may be from the camp of action, assures the dominion of the sea, in the same way as gold, which, even when not in use, gives

security and credit to the circulation of national money. By great luck this preponderance in cannon and floating armour belongs to the Quadruple Alliance, though principally by merit of Great Britain, whose material forces are, besides, strengthened and animated by glorious secular traditions.

But the fleets—by the conditions of modern war—must be kept intact, ever ready for the supreme test of the Great Battle, although this very probably will never come. The inaction to which the fleets are bound to submit has, however, a different character in the two hostile groups of Allies. That of the Central Empires is a passive inaction, the *raison-d'être* of which is to arrive at peace negotiations with the fleets intact: the inaction of the British, French, and Italian fleets, founded on the material impossibility of hunting out their enemies protected by their formidable bases, guarantees for themselves the liberty of the sea and forbids it to their enemies. Hence, particularly in restricted basins, such as the Adriatic characteristically is, the warfare must be developed by employing only small craft, submarines and aircraft.

NAVAL EVENTS: THE LOSSES.

But we also, alas, had to expose our ships in one of the first phases of hostility: the consequences were lamentable. The armoured cruiser *Amalfi* was torpedoed on July 6th by an enemy submarine in the Upper Adriatic; later, on July 18th, we lost in the Middle Adriatic the other armoured cruiser, *Garibaldi*; this latter also was torpedoed by a submarine.

The *Amalfi* on the night of the 5th had taken part in a reconnaissance in force towards the enemy coast, probably with the object of engaging Austrian ships which were reported to have left their ports to make incursions on our own coasts. In the morning, at dawn, a little after 4 o'clock, while she was steaming at 17 knots an hour, she was struck in the centre on the port side by a torpedo fired by an enemy submarine. In six minutes she was lying on her port side, and in another ten minutes she had turned turtle and sunk.

The *Garibaldi*, together with the twin ships *Ferruccio* and *Varese*, had on June 5th bombarded an extensive tract

of the Cattaro-Ragusa railway, causing damage which, on account of the special construction of the line, required some weeks to repair.

In the new raid of July 18th, the *Vettor Pisani* joined the *Garibaldi*. The enemy coast was approached and at a distance of 1,000 yards was bombarded with intensity. During the action many attacks by submarines were repulsed and torpedoes avoided. But when our Division, having ceased fire, began to take the homeward route, two torpedoes were fired against the *Garibaldi*. By a clever manœuvre one was avoided, but the other struck, with a strong angle of incidence, the centre of the port side of the vessel. In eight minutes the ship sank.

It was an old ship, but the type had been so well thought out by its constructor (General Masdea, of the Naval Engineers) that even to-day it could still render useful services. The *Amalfi* was, without doubt, a good ship, and, although no longer modern, gained by comparison with the three Austrian ships of the *Erzherzog* class—*Erz. Ferdinand Max*, *Erz. Friedrich*, *Erz. Karl*. We possessed four of such ships—*San Giorgio*, *San Marco*, *Pisa*, *Amalfi*; now only three remain, corresponding, that is, to the three Austrian ships.

By good luck the majority of the crew were saved; these showed in the disaster great coolness and a truly admirable discipline, even when in the water.

The other losses are small boats, and, taken by and large, these losses are about equal on both sides. We have lost two submarines, a destroyer (the *Turbine*) and a torpedo-boat. The Austrians have lost the torpedo-boat No. 51, the *U3*, *U12*, and a third submarine; a fourth was bombarded, with probable success, by a French aviator: but another torpedo-boat, two destroyers of the *Tatra* type and two light cruisers of the *Saida* type were badly damaged in the attack of May 24th on our coasts. Indeed, if the respective losses of the two fleets be compared with the number of small boats each possessed in the beginning, the percentage of the Austrian losses is superior to ours.

ACTIONS AGAINST THE ISLANDS.

The islands of the Dalmatian Archipelago, the nearest to our own coasts, were points of supply for submarines

and important scouting stations. The little island of Pelagosa, although first bombarded by the French and afterwards by us, continued to make flashlight signals. This scouting and supply station had therefore to be destroyed, and there were other reasons which rendered it necessary for us to take it.

Each one of the operations attempted by us met with full success, even if saddened by some losses, and of this we had abundant confirmation from the prisoners, notwithstanding the systematic and often comic attenuations or denials of the Austrian communications.

Twice again the Austrians attempted to recapture Pelagosa, and in one of those attempts made an attack with twenty light vessels, comprising light cruisers and destroyers. Twice the Austrians had to beat a retreat. Our garrison did its duty admirably, but nothing more: therefore the failure of the Austrians to recapture, by an attack of considerable force, a tiny island, every inch of which they must have known, is certainly a noteworthy one. This does not mean to say that the strategic importance of the rock of Pelagosa is at all noteworthy; and if our enemies—as it would appear from the forces directed against it—have attributed such an error to us, they have been evidently deceived.

BOMBARDMENTS.

In like manner our enemies have not comprehended the uselessness of the continuous small bombardments on our shores. In general there are two destroyers, or four at the most, which together with a light cruiser present themselves at dawn on our coasts—fire fifty shots over a vast extent of coast and then suddenly retreat. Except the killing of some imprudent person or some infirm old man unable to seek refuge, or a small outbreak of fire easily dealt with, these actions have never—absolutely never—inflicted any damage of military character. All these bombardments are practically the same, and the chronicle of one is with few and slight variations the chronicle of the others.

Even the first bombardment, that at the dawn of May 24th, a few hours after the declaration of war, had not the slightest military effect, yet this did more damage to the civil popu-

lation and to their property than those which followed, because the attack was delivered by bigger ships and along almost the whole of the coast.

Preoccupied with the unfavourable situation of our Adriatic cities, hardly did we become aware that war was inevitable than we removed all the cannon—all of very old type—which still protected Ancona, and a few other old guns left here and there as ancient souvenirs. With the exception of Venice, Porto Corsini, and Brindisi, not one cannon—even in a museum—was left in the whole extent of our Adriatic coasts.

We were simple, and paid the tribute of the simple. All our cities, country towns, and villages were bombarded. Not one military work, even where there was one, was damaged; but women, old men, children, peaceful citizens, and private property suffered damage—fortunately not grave, because as soon as the Austrian ships became aware that the Italian submarines were near, they fled after little more than a half-hour's bombardment.

The enemy believed that Porto Corsini, which is a torpedo-boat station, was completely undefended; but it was there that a few well-hidden cannon damaged the light cruiser *Novara*, seriously injured a destroyer of the *Tatra* type and the torpedo-boat 80S, which, without the ready help of the *Novara*, would have sunk. In the meantime, one of our destroyers bombarded and, with its crew, occupied Porto Buso, situated on the other side of our frontier, capturing the entire garrison of forty men. And in the Middle Adriatic a naval division from which the *Turbine* was too far distant arrived in time to inflict serious damage on a cruiser of the *Saida* type, which was last seen careening to one side. A destroyer, *Czepel*, was also damaged.

For some time, however, the Austrian Marine has ceased the innocuous incursions on our coasts. Why? Perhaps it has recognised their entire futility. Or perhaps Austria, which, in its mentality, unchanged since the days of Metternich, accepted like a dogma the legend of the Revolution always ready to break out in Italy, has now discovered, but too late, that we are united and firm as a single man?

We do not believe all this. The cause is much simpler: fishing has been prohibited in the Adriatic since July 25th. A precious source of information is thus now lacking, nourished specially by Austrian fishing-boats disguised as

Italians. The impossibility, depending on the uncertainty of the state of defence of the neighbouring waters, of striking a severe blow at our coasts without running any risk, dissuades our enemy from daring an action in which probably the game is not worth the candle.

AERIAL RAIDS.

Neither Italy nor Austria possess a numerous aerial fleet, and, so far as one can discover, the latter possesses no dirigibles. Doubtless, however, the activity of our aeronauts has been more intense and successful than that of the Austrians. Pola has been bombarded from the air four times, and the columns of smoke ascending from the Arsenal could be observed the day after at twenty miles' distance. Above the destroyers at Sebenico bombs were successfully dropped, and on the *Sodarwerke* (factories for the production of asphyxiating gas) of Monfalcone, and the dockyard of Trieste, producing extensive fires: explosives were also thrown by naval aviators on the railway junction of Divazza. In these and other secondary raids we have lost two dirigibles, and with them, unfortunately, excellent commanders, officers, and crews.

We have suffered no appreciable damage from the aerial action of the enemy against our coasts. Three Austrian hydroplanes have fallen into our hands; a fourth recently has been brought down by our artillery in the Venetian lagoons: the officers who guided them have been made prisoners, but we were not able to capture the fourth machine itself, as it sank.

These are the naval events, put succinctly, of the three months' war with Austria. The balance, perhaps, is against us; the losses of the *Amalfi* and the *Garibaldi* make it so. But notwithstanding this, we think that a criticism, giving a *résumé* of this first period, should not limit itself to counting on the fingers the tonnage lost. We believe—but we certainly cannot demonstrate it in these pages—that our Navy, which has entered the last in the lists, has conducted itself well against an enemy whom a year's fighting has rendered crafty and prudent; in a sea in which, through supine political acquiescence—even this a testimony of the state of vassalage in which we were held by our old ally—we had almost been forbidden to manœuvre. If one wishes

to be severe, one may attribute one fault to our Navy, the fault of sometimes being too daring. But it should be easy to lead the daring into ways of prudence.

And the motto of the war is to-day—*Prudence*: the prudence of the bold and tenacious; that prudence of which Admiral Jellicoe, head of the most powerful Fleet in the world, gives so marvellous an example. This is a form of new heroism, less accessible to the common intelligence, gaining little reward of applause from the masses, but containing in itself a great and continued exercise of virtue and character.

Our Fleet, by forbidding the sea to the enemy, and by preventing any other Fleet from entering the sea in order to join him, competes in the attainment of the objective of the Allied Fleets on the ocean, which is the absolute dominion of the sea. And it is this dominion that the victory of the Quadruple Alliance hopes for; the victory, that is, of right against might, of liberty against oppression: because, as in the days of the Phœnicians, of the Romans, of the Middle Ages, the truth proclaimed by the British is alive to-day: "Who rules the waves rules the world."

R. MAZZINGHI

(Rear-Admiral, Royal Italian Navy).

CHAPTER IX.

A Brief Outline of the Imperial Japanese Naval Operations in the War.

[The following article has been prepared by a distinguished officer of the Japanese Navy who wishes to remain anonymous.]

I. COASTGUARD VESSELS

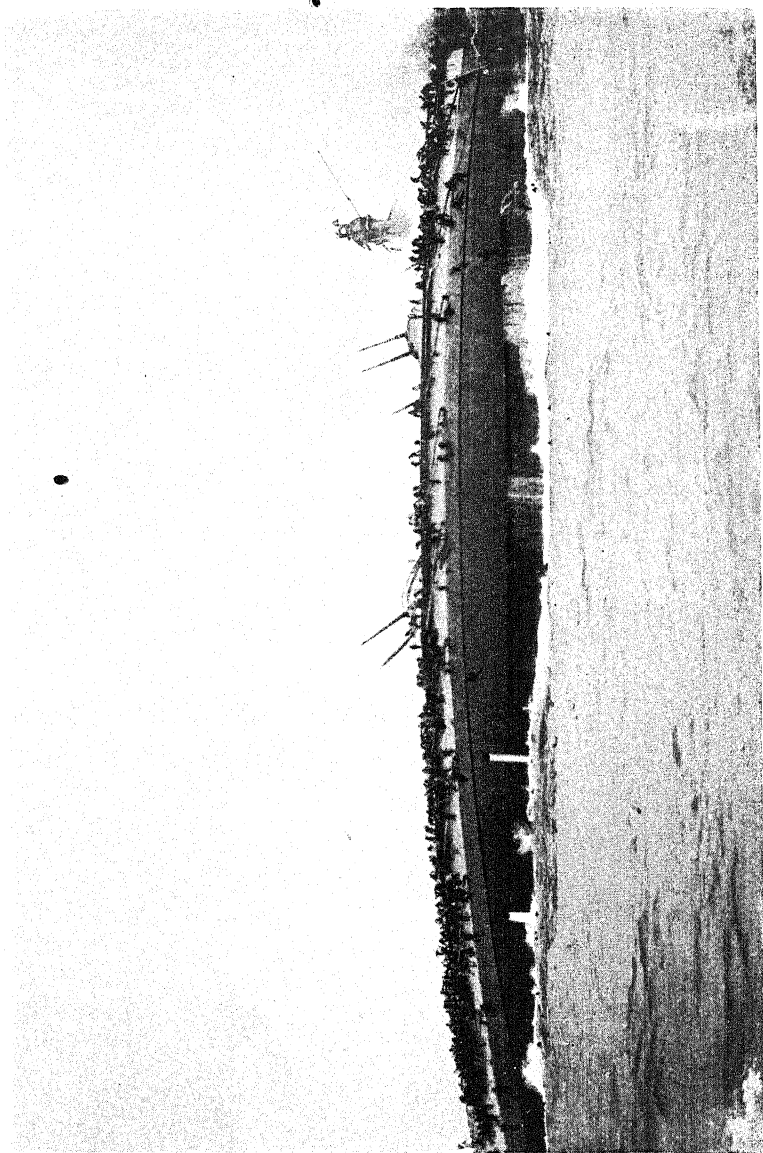
CONSEQUENT upon the outbreak of the European War at the beginning of August last year, the Imperial Navy dispatched guardships to various localities of importance with a view to the maintenance of strict neutrality. Later on, with the rupture of diplomatic relations with Germany, all the fleets were immediately mobilised, while steps were taken to strengthen the coast-guard and defend all points of strategical importance.

2. OPERATIONS OFF KIAOCHAU BAY

With the declaration of war against Germany on August 23rd the First Fleet proceeded to sea for the purpose of hunting down the enemy ships and took up a rendezvous extending from the Yellow Sea to the northern portion of the eastern seas, while the Second Fleet proceeded to the front of Kiaochau Bay and commenced operations assigned to it, and thus established the blockade of the bay on August 27th.

During all this time the main force of the Oriental Fleet of the enemy had concealed itself over the southern part of the Pacific Ocean, while the remnant was bottled up in Tsingtau and hardly made its appearance outside.

Under these circumstances, our Navy, while holding itself in readiness for any eventuality as detailed above, had but to watch the development of the situation until the end of



[Daily Mail Photo]

"BATTLE PRACTICE," JAN. 24TH, 1915

August, when the transportation of the first detachment of our besieging army was commenced. Thereupon the First Fleet, stationed in southern Korean waters, in conjunction with a portion of the Second Fleet cruising in the Yellow Sea, undertook the duties of guarding the sea route and rendering direct and indirect assistance in conveying the transports. From that time the squadron under the command of Rear-Admiral Kamimura, in co-operation with the Port Arthur detachment, assisted the landing of troops at Lunkiang. Thus the mission of our Navy in this direction was successfully accomplished on September 13th.

During that time the squadron under the direct command of Vice-Admiral S. Kato, Commander-in-Chief of the Second Fleet, and the squadrons under the respective commands of Vice-Admiral Tochinai and Rear-Admiral Okada, as well as a Special Service squadron, concentrated all their combined efforts upon Kiaochau Bay and its neighbourhood, keeping the strictest watch both day and night, and finally completely bottling up the enemy in the harbour, while a flotilla of mine-sweepers, in the face of boisterous storms, conducted successful operations in clearing the seas at the approach to the point where the second detachment of the army was to land. Successive reconnaissance over the enemy camps was carried out by our aircraft with complete success, and the cruiser *Takachiho* cut off the lines of communication of the enemy over the sea.

Thus every available force, adjusting itself admirably to the march of the situation, was thrown into the scale.

With the commencement of the second transportation of the — army in the middle of September, the First Fleet was again employed in convoying the transports, and the squadron under the command of Rear-Admiral Kamimura, together with the Port Arthur detachments, directed their efforts to assisting the landing of troops at Raoshun-wan, while the main force of the Second Fleet, consequent on the gradual progress of mine-sweeping, co-operated with the land force in bombarding repeatedly from September 28th the divers fortresses on the right wing of the enemy, and rendering the blockade more effective with the help of Rear-Admiral Kamimura's squadron and the Port Arthur detachments. The heavy naval artillery which had been working with the besieging army commenced the bombardment, on October 14th, of the enemy warships in the

harbour, with the result of curbing their action, and then took part in the bombardment of the Tsingtau fort.

Towards the end of October, as the necessary preparations for the siege were nearly completed, the Second Fleet on the 29th commenced a furious bombardment of the forts and the positions of the enemy, and then played a magnificent part in the general cannonade commencing on the 31st.

On November 7th the enemy surrendered, and the blockade of the harbour was raised in consequence on the 10th.

Thus the operations in this theatre of the war were brought to a conclusion.

In these operations the British man-of-war *Triumph* and destroyer *Usk* co-operated with the Second Fleet, taking part in the blockade as well as in the bombardment.

The following ships were lost by our Navy during the above operations, viz. :

- 1 Cruiser,
- 1 Destroyer,
- 1 Torpedo-boat,
- 3 Specially commissioned vessels;

while the enemy sustained the following losses, being either sunk or destroyed, viz. :

- 1 Cruiser,
- 5 Gunboats,
- 2 Destroyers.

3. OPERATIONS IN THE EASTERN SEAS AND CHINESE WATERS

Upon the outbreak of war the Third Fleet was assigned the duty of protecting the trade route and guarding the sea extending from the southern seas to the Chinese waters in conjunction with the guardship at the Makoh Naval Station, Formosa. Later on the duties of this fleet were extended to protecting the sea east of the Malay Peninsula and of effecting communication with its sister squadrons, adjusting itself from time to time as the exigencies of general warfare demanded. Since the enemy ships were entirely cleared from the seas in the East in the beginning of November, the above fleet was mainly occupied in the surveillance of enemy vessels.

4. OPERATIONS IN THE INDIAN OCEAN

Certain vessels of the squadron dispatched to the southern seas were detached and proceeded to Singapore on

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August 26th and carried out operations in concert with the British Eastern Squadron. At that time, nothing was known of the disposition of the enemy in these regions. Consequently the Allied Fleets had no alternative but to maintain a watchful attitude for the time being and guard the seas of that part of the world. The sudden appearance, however, of the *Emden* in the eastern part of the Indian Ocean on September 10th lent an impetus to the detached warships, which set out immediately on the hunt for her, reinforced by other war vessels, in order to discharge the duties of convoying the British transports, and, in conjunction with a British squadron, pursued a course of action responding to the disposition of the enemy. The *Emden*, however, becoming more and more active, and the Indian trade route jeopardised, another detached squadron under Vice-Admiral S. Tochinai was dispatched to this scene of action on November 25th. Happily on November 9th the *Emden*, in raiding the Cocos Islands, was discovered by H.M. Australian warship *Sydney* and destroyed, which brought the operations in these regions to a close.

5. OPERATIONS IN THE PACIFIC

At the commencement of hostilities a portion of the enemy was in the neighbourhood of the Hawaiian Islands, but neither the position of the main force of the enemy squadron, which had been cruising in the southern part of the Pacific Ocean, nor that of the enemy ships escaped from Kiaochau Harbour, was known. Accordingly, the Imperial Navy charged a portion of the First Fleet with the mission of hunting down the enemy on the trade route between Japan and North America, while at the same time several units were dispatched to the southern seas one after another with a view to co-operating with the British squadron searching for the main enemy force, which had concealed itself so well that no scent of its whereabouts was obtained. Our squadron therefore occupied itself for the time being in taking possession of the enemy territory of importance scattered in these regions, and deprived him of his bases of operations; this action eventually turned out to be of great importance in the development of further operations.

While the Allied squadron in the neighbourhood of North

America was engaged in hunting the enemy in those seas and in affording protection to trade, the enemy ship *Geier* entered the port of Honolulu on October 15th accompanied by a transport. Accordingly, a portion of our squadron which happened to be cruising in that vicinity lost no time in making for that port and subjecting her to strict surveillance, which however was abandoned later, on confirmation of the fact that she would be properly detained by the American authorities, on November 7th. Just at this time the main force of the enemy turned up off the Chilian coast and it became evident that the enemy ships which had formerly been scattered in various quarters had effected a junction with the main force.

After the battle off the Falkland Islands, our squadron which had been hunting the enemy forces off the west coast of South America, in co-operation with the British squadron, was reduced to a few cruisers, the remainder returning to Japan.

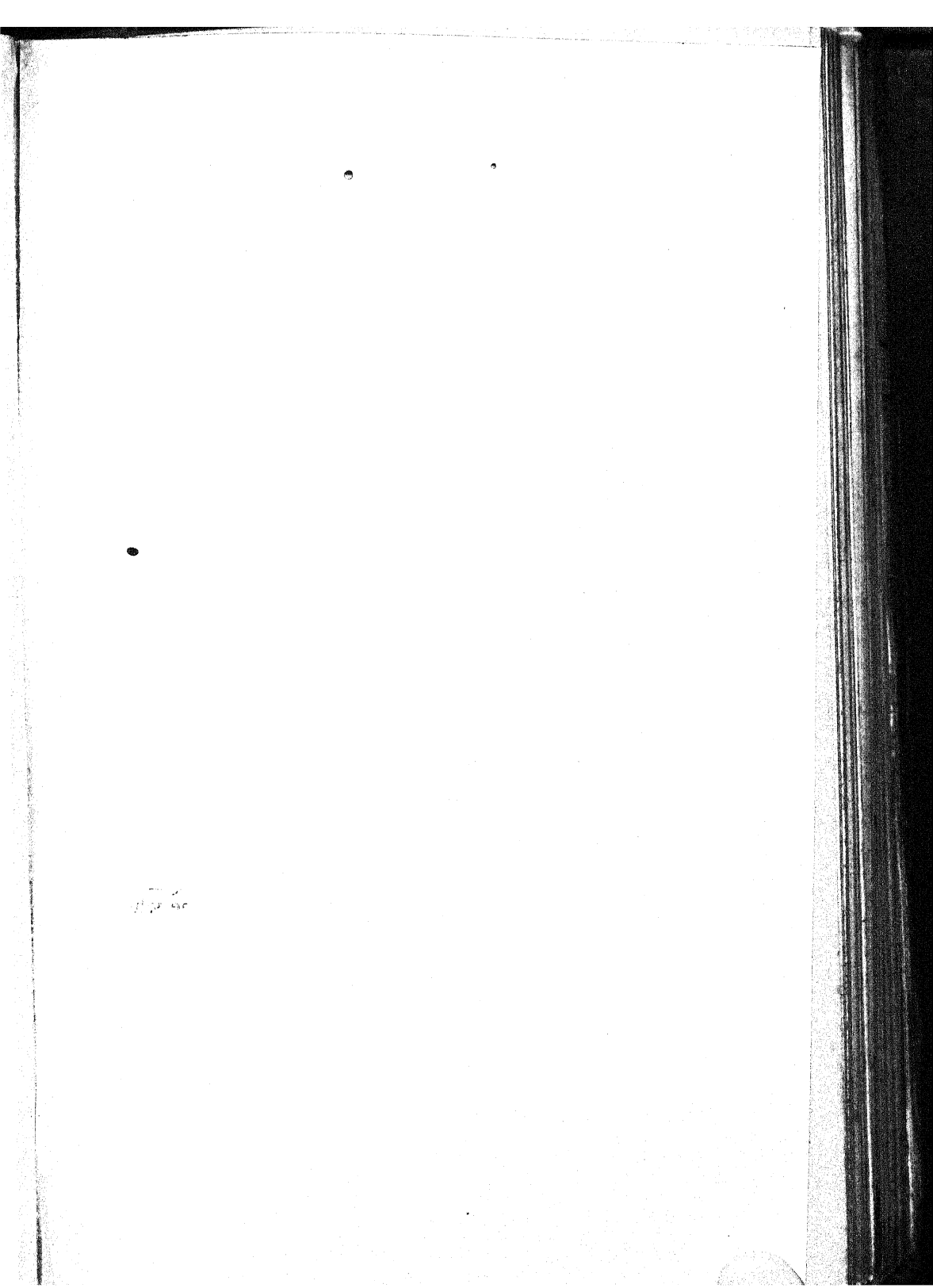
In the meantime, the enemy ships *Dresden*, *Prinz Eitel Friedrich*, and *Kronprinz Wilhelm*, still remained afloat concealing themselves, so our cruisers were detailed to search for them off the western coast of America and in the South Pacific, in co-operation with a British squadron.

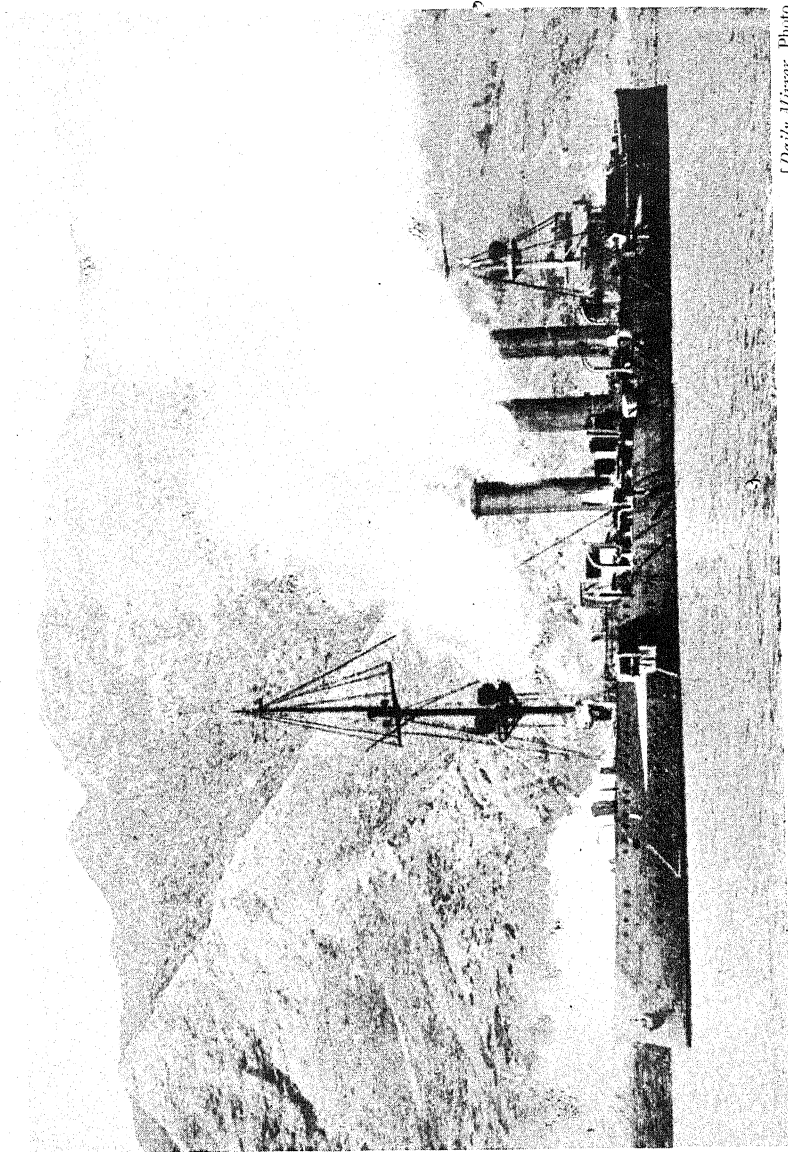
After the destruction of the *Dresden* most of our ships were ordered home, a few remaining off the west coast of America for surveillance duties.

According to circumstances, several cruisers are always engaged in cruising around Singapore and the neighbourhood on patrol duties.

This is a summary of the naval operations in diverse quarters since the commencement of the war at the beginning of September 1915. Thus the enemy ships over the whole world, except in their home waters, have been destroyed or sent to the bottom one after another, and the enemy ship is no more in evidence in the East.

A JAPANESE NAVAL OFFICER.





[Daily Mirror Photo]

THE "DRESDEN" SINKING AT JUAN FERNANDEZ

CHAPTER X.

Aircraft in the War.

BEFORE one begins to consider the uses of aircraft in the present war, whether in relation to sea warfare or land warfare, it is necessary to bear one fact very clearly in mind—namely, that the best aeroplanes of to-day are very imperfect pieces of mechanism, and are very far from the ultimate phase of their development. And airships are in a still more primitive state.

The aeroplane of to-day, compared with the type already in sight in the mind's eye of modern designers, is as the earliest breech-loading naval gun compared with the latest "super-15-in." of the newest battleships, or as our old 9-in. field howitzers compared with the German 21-in. siege howitzers.

It is very necessary to remember this, for it not only increases one's appreciation of what has been done by aircraft in general, but it is a reply to certain people in the Navy—some of them in high places—who are disposed to regard all aircraft with scorn because naval aeroplanes have not had any very notable effect so far on naval strategy and tactics.

One does not imagine that the first couple of dozen breech-loading guns used on board ship had any immediate effect on the strategy of the period, and one gathers that older officers objected to them on the ground that the danger of blowing out breech-blocks discounted any advantage accruing from more rapid or accurate fire.

Iron ships, steam, water-tube boilers, steel armour, oil fuel, and submarines have all had to fight similar opposition, so we who can see some little way ahead into the future of aircraft are in no way discouraged by destructive criticism or by hide-bound opposition. We merely regret that it should be so, because constructive criticism from senior officers would hasten developments.

So much, not by way of apology for the shortcomings of aircraft, but as an indication of the high value of what aircraft have done.

THE EARLY DAYS OF THE WAR.

It will for ever be to the credit of their Lordships of the Admiralty holding office in July 1914 that the Fleet was mobilised for the so-called review at Spithead. None dared at the time to call it a warning to Germany, but such it was, and it was a valuable precaution also, for it ensured everything being ready when war began.

The Royal Naval Air Service, which only came into being on the first day of that month, mobilised with the rest of the Fleet, and though its few seaplanes did not make much of a show, their flying certainly impressed a certain number of naval officers favourably.

Directly after the "review" the seaplanes returned to their various stations, so that as soon as war was declared they were ready to commence that system of coast patrols which has been maintained with great regularity ever since.

The fact that none of the aircraft found anything of importance may be ascribed with fairness to the fact that there was nothing to find.

Similarly, while the British Expeditionary Force was being transported to France, Naval Airships Nos. 3 and 4 (the French *Astra Torres* and the German *Parseval*) kept up a constant patrol between the North Foreland and Flushing. Seaplanes also patrolled the Straits of Dover with great regularity. Neither airships nor seaplanes found any important German vessels, again for the reason that there was nothing to find, for at that period the German submarine offensive had not begun.

Nevertheless the R.N.A.S. did its duty under arduous and dangerous circumstances. Many thousands of miles were covered out of sight of land or of shipping, much of the distance in fog, or over rough water which would have wrecked any seaplane that came down on it. Therefore it speaks highly for the skill of the pilots, and for the good work done by the air-mechanics responsible for the care of aeroplanes and engines, that in the whole period only

one machine—with two officers on board—disappeared at sea. Certainly others have had narrow escapes. In one case an officer and a wireless operator spent over an hour on the water in a thick fog on a seaplane which had been brought down by engine failure, and was being steadily knocked to pieces by the sea. Suddenly one of the destroyers from their own base nosed up into the 200 yards circle which limited their vision, and nearly ran them down. Considering that they were out of the track of shipping and had no way of signalling for help when once on the water, and that the destroyer was not looking for them, the coincidence was almost miraculous. The officer's chief grouse about the incident was that though he had a plentiful supply of perfectly good cigarettes aboard, both he and his passenger were too sea-sick to smoke them, so the agony of suspense was accentuated instead of alleviated.

THE REALLY NAVAL AIR SERVICE.

Apart from coast patrols, and sea patrols from land bases, much really useful work has been done by seaplane-carrying ships, though it must be remembered that this branch of aviation is in a still more primitive state than is the use of ordinary seaplanes from coast stations, or of shore-going aircraft.

Experiments in launching aeroplanes from ships were made years before the war, but never got very far, so we are still at the stage where the seaplanes have to be swung outboard by a derrick and lowered into the water, which, obviously, confines the use of the machines to moderately calm seas.

Though seaplane-carriers had been in use for some time before, the first official intimation of their existence was given in the Admiralty *communiqué* describing the raid on Cuxhaven and the adjacent coast. Little material damage was done on this occasion, but considerable information and useful experience was gained. The flotilla then mentioned has not been heard of by the public since then, but it may be permissible to say that it has not been idle.

Among the activities of seaplane-carriers is, naturally, the search for submarines, but apart from that seaplanes working in conjunction with ships have been found useful in detecting mines, the seaplanes acting much as a pointer

does for the man with a gun, their high speed enabling them to cover a considerable area while the accompanying ship progresses warily, watching for the signal that a mine has been spotted by the observer in the seaplane, who is in suitable weather able to see some distance below the surface.

Seaplanes operating from ships have also been officially announced as having assisted at the operations at the Dardanelles and at the destruction of the *Königsberg*.

Other places in which and purposes for which they have been used must not at the moment be disclosed, except in so far as Admiralty *communiqués* have mentioned the work done by seaplanes at the Dardanelles operating from H.M.S. *Ark Royal*—the first ship built specially as a seaplane carrier—and from other vessels temporarily employed for the purpose. It was officially announced that an R.N.A.S. officer from this squadron sank a Turkish transport with a projectile—said by the Turks to have been a bomb—launched from a seaplane.

THE NAVY'S SHORE-GOING AEROPLANES.

The work of the Navy's shore-going aeroplanes has, somewhat naturally, come more before the public than that of the seaplanes, chiefly because there could be no object in maintaining secrecy when their presence was constantly forced upon the attention of the enemy.

Comparatively early in the war a detachment of the R.N.A.S. went to Ostend, to assist the Belgian Army, and to watch the westward movement of the Germans after the Anglo-French Armies had retreated to the south. This detachment acquired sundry armoured cars, and carried on a species of guerilla warfare with the advancing cavalry screen of Uhlans, the aeroplanes acting on occasion as scouts to locate the game for the armoured cars. The aeroplanes also operated in some degree as weapons of offence by dropping bombs and by using machine-guns.

One D.S.O. was won, and sundry trophies, such as Uhlans' helmets, iron crosses, and small arms, were acquired.

At a somewhat later date another and smaller detachment went to Antwerp and successfully carried out raids on Cologne and Düsseldorf. The railway station at Cologne was damaged, and the airship shed at Düsseldorf was twice

attacked. On the second attempt the shed and a brand-new Zeppelin inside it were destroyed. Three D.S.O.'s were won in these operations.

When the Germans finally occupied all Belgium, except the bit behind the Nieuport-Ypres line, larger detachments of the R.N.A.S. were sent over and located at Dunkerque, where they settled down to a steady policy of pin-pricks, which, if they have not actually altered the course of the war, have at any rate caused the Germans acute annoyance and have cost them a considerable amount of trouble and money.

Raids with twenty-five or thirty aeroplanes at a time have been made on the Belgian coast towns held by the Germans. Bombs were dropped on the headquarters billets at Ostend. Submarines under construction at the Cockerill Yard at Antwerp were damaged. Other submarines in the docks at Ghent and Zeebrugge were bombed, and the harbour at Zeebrugge has been kept under constant observation.

Whenever information has been obtained as to the exact whereabouts of depots of stores or ammunition, aeroplanes have gone out and bombed them, frequently with excellent effect.

But perhaps the most striking effect of this plan of campaign has been the notable limitation of raids by German airships on the British coast from bases in Belgium. It is fairly well established that the Zeppelins which raided the south-eastern counties started from the sheds erected at Ghent and Brussels. As soon as these sheds were definitely located, continual efforts were made to destroy them. On several occasions the sheds were damaged, but not actually wiped out, and once a small airship was destroyed in its shed.

Once a Zeppelin returning from England in the early morning was seen and attacked, but only one aviator was able to get above it, and by a cruel piece of bad luck the bombs he dropped, though they actually hit the ship, failed to set her alight, probably owing to the fact that they burst right inside the gas-bags—and hydrogen is not inflammable till mixed with the right amount of air.

However, only a few days afterwards two young officers went out and destroyed utterly a shed near Brussels with a new Zeppelin inside it. The bombs dropped by the first

apparently did considerable damage and caused gas to escape, and those dropped by the second set fire to the gas, so that shed and airship both were destroyed.

On the same morning another naval aviator, who had gone to look for another shed, happened across a second Zeppelin which was returning from England. He succeeded in getting above the Zeppelin and dropped several bombs thereon, with the result that the airship caught fire and was utterly destroyed, together with all its crew, which included several of the crack German airship officers.

Some time later a Zeppelin which had been damaged by gun-fire from forts on the English coast, and so damaged that she was forced to come down on the water near Ostend, was totally destroyed by bombs dropped by aeroplanes from Dunkerque.

Perhaps a still more notable performance was the sinking of a German submarine in the North Sea off the Belgian coast by a bomb dropped from a shore-going aeroplane by an R.N.A.S. officer from Dunkerque.

Since that event, and up to the time of writing these notes, the detachment on the Continent has not pulled off any really big performance, but there have been continual minor actions between R.N.A.S. pilots and German aviators. Also, a considerable amount of reconnaissance has been done. One of the most useful pieces of work was the locating of the big long-range gun with which the Germans bombarded Dunkerque on several occasions. A few bombs were dropped in its vicinity, and apparently the discovery of its position was enough to induce the Germans to move it to some other district.

Apart from the Flanders detachment a single but important raid was made from Belfort on the French eastern frontier by three officers of the R.N.A.S. on the Zeppelin works at Friedrichshafen on Lake Constance, where some damage was done and the production of new Zeppelins was delayed for a few weeks. One of the three officers was shot down and captured, but the other two returned safely, and all three were awarded the D.S.O. and the French Legion of Honour.

Towards the end of the first year of war there was considerably more co-operation between the R.N.A.S. in Flanders and the Royal Flying Corps in the neighbouring districts, in that pilots of the R.N.A.S. took regular part in

military routinework of reconnaissance and artillery-spotting; but the true gauge of the R.N.A.S. detachment in Flanders is the effect it has had as an outpost of our coast-defence scheme—which is what it is, in fact, rather than an offensive force. It has undoubtedly prevented a number of airship raids across the Channel and has prevented still more dashes by German aeroplanes. The amount of material damage it has done to the enemy probably more than pays for the cost of its own equipment and upkeep, so on the whole one may regard it as being rather a good investment.

BALLOONS.

Beyond the cross-Channel patrols early in the war—which became publicly known owing to photographs of the airships at Ostend having been passed by the Censor—it is impossible to refer to the work done by the Naval Airship Section of the R.N.A.S., for the Section's work has been carried on outside the ken of the enemy's fleet or troops; nevertheless, in justice to the officers and men of this section, perhaps one may be permitted to say that their work has been a great deal more useful than most people, either in the services or out, have known. No doubt some naval and military readers of this volume have seen a good deal of our naval airships, but I must refrain from being more specific until after the war.

One division of the R.N.A.S., however, is well worthy of notice, and may be talked of freely because it has been very much in sight of the enemy, and that is the part of the service composing the kite-balloon sections. The kite-balloon is a singularly unlovely, sausage-shaped instrument, ludicrous in its appearance, attitude, and antics, but as an artillery observation station it is great, and quite outclasses any church-tower or hill-top, or the tallest of tall ships. Like many efficient but unpleasing things, it is a German product, and its continual use by Germans convinced our artillery in Flanders that it was worth having. Being a novelty in this country, though ten years old in the German Army, its introduction was strenuously opposed in the War Office, but it was taken up by the Air Department at the Admiralty, and a number of kite-balloon sections were equipped and sent to the Dardanelles and elsewhere. They did

excellent work for months, and when they had finally proved their worth by enabling warships to sink unseen Turkish transports the other side of the Gallipoli Peninsula, and had helped British artillery to score direct hits on German guns in Flanders, the War Office suddenly made up their mind that there was something in them, and proceeded to take over all the matériel and personnel of several R.N.A.S. sections and transfer them bodily to the R.F.C. The inside history of the introduction of kite-balloons to the Flying Services is quite a chapter for the Comic History of England, and those of us who were concerned therein had quite a good deal of amusement as a reward for doing something for our country's welfare.

A MILD PROPHECY.

As I have said, the R.N.A.S. is only the very small beginning of the Naval Air Service that we must build up in the future, for we have seen enough in the first twelve months of war to show us that this is the last war in which the sea-going Navy will suffice by itself to protect the British Isles from invasion.

In the next war—for there will be next wars so long as man remains a predatory animal with eyes in the front of his head instead of at the sides—an enormously powerful air fleet will be our only protection against raids of such size as to destroy whole towns, even if whole invading armies are not conveyed by air. That air fleet may be the affair of the Army, seeing that it will be a land-defence force, but even so there will be plenty for the Navy to do in the air.

Every flotilla and squadron must have its accompanying air scouts in the future. In fact every ship will probably carry two or three aeroplanes. Then all our colonial ports and coaling stations must have not only air scouts, but big fighting aeroplanes in reasonable quantities.

Probably also our scheme of home defence will include huge seaplanes operated by the Navy, for when it comes to building really big machines the sea makes a handier manœuvring place than does any aerodrome, however large. Therefore one can see plenty of room for the development of naval aviation apart from military aviation.

MILITARY AVIATION

Though this volume has inherently nothing to do with the work of the Army, it may be well to give a brief outline of what the Royal Flying Corps, which is the Army's side of the twin Flying Services, has done to influence the course of the war, as it may suggest possible analogies in future naval wars.

Before war broke out many able and experienced soldiers held the belief that the use of adequate aircraft would hasten the end of any war simply because the air-scouts would enable the army commanders to penetrate what military lecturers are so fond of calling "the fog of war," and so would the sooner bring about a decisive action. The fog of war has been penetrated right enough, but as both sides have been able to penetrate it equally and to take proper steps in time to counter the other side's offensive, the result has simply been the deadlock which has held French, British, and German troops immobile in France for practically a year, with constant fighting, constant losses, and no progress either way.

When the British Expeditionary Force, holding the left of the French line at Mons, found itself faced by large German forces, under any old-fashioned circumstances it would have stopped where it was and would have fought to a finish. As it so happened, an officer of the R.F.C. discovered that instead of being faced by three divisions (or say 40,000 men) the advanced British division was faced by three army corps, or between 150,000 and 160,000 Germans, which would have meant absolute annihilation if the British had stayed to fight. This officer's estimate, which at first was doubted by his senior officers, was confirmed by several experienced soldiers acting as observers on other aeroplanes, and as a result the British troops were withdrawn in time to save them—or at any rate all but the rearguard told off to delay the enemy's advance as much as possible.

The cutting up of the B.E.F. would have meant almost certainly the loss of Paris, and the cutting off of the pick of the French Army, then concentrated on the Franco-German frontier, from the rest of France, and quite possibly the collapse of the French defensive, at any rate for the time being. It would have meant, at any rate, the loss of the

whole north-west coast of France, and the establishment of German submarine bases as far south as Havre.

Thus one sees that our military aviators practically saved the whole situation in France at the very beginning of the war.

Later, during the battle of the Marne, they discovered the lines of the German retreat, thus telling the generals of the Allies just where to strike with effect. At the same time the German aviators, who were far more numerous than either the French or English, and probably more so than both combined, enabled the German commanders to tell where the blow was to be dealt, so that they saved General von Kluck's army much as our air-scouts saved our army.

Up to this time the R.F.C. had done little except pure scouting work, but later on, when the opposing armies were deadlocked in trenches, the R.F.C. began to adopt various other forms of activity. Before that time, bomb-dropping was not regarded as a serious part of a military aviator's job. Youthful and enthusiastic pilots were occasionally allowed to go bomb-dropping on "off-days." One of them, soon after the German retreat to the Aisne, got a D.S.O. for blowing up a whole train of motor-lorries full of ammunition, by hitting one of the leading wagons with a bomb and setting it going so that the rest detonated from it as they telescoped into one another; but this was not regarded as serious war, and in those days there were no really big bombs, no special bomb-dropping aeroplanes, no bomb-dropping tackle, and practically no bomb-sights.

Since then things have changed materially, for at the battle of Neuve Chapelle, R.F.C. officers were told off specially to destroy bridges and railway junctions behind the German lines, with bombs, so as to prevent reinforcements and supplies from reaching the fighting line. One officer who was killed got a V.C. for this job, and several others got D.S.O.'s and Military Crosses.

Similarly during the "big push" at the end of September a number of R.F.C. officers were detailed for bomb-dropping behind the German lines, the official notes from Sir John French mentioning the railway junction at Valenciennes particularly as one of the points bombarded by aircraft.

As the numbers of British aircraft increased during 1915, another function of the R.F.C. was developed, namely that

of fighting in the air. During the move round from La Ferté-en-Tardenois, south of the Aisne, to the new British position between La Bassée and Ypres, at the end of 1914, the R.F.C. made gallant efforts to hide the movement from German air scouts by driving all German aircraft from the sky, and in a measure they succeeded. Later, before the battle of Neuve Chapelle and the "great push," similar tactics were tried in order to hide our artillery dispositions, and with a greater measure of success than any one had expected, especially in the latter instance, when the R.F.C. pilots fought eighty-four combats in the air during the month, and in only one case was the British aviator defeated.

It became obvious then to the whole army that—as R.F.C. officers had been arguing for years—if one belligerent can obtain command of the air the other belligerent is practically blinded and so can be attacked at unexpected points. If in the early days of the war the numerous German aeroplanes had devoted themselves to clearing the British aviators from the air the surprise of the Expeditionary Force by those three German army corps moved in motor wagons might have come off, but as it was the German aeroplanes were confined almost entirely to artillery fire-control, and it was not till late in the summer of 1915 that German "battle-aeroplanes" made their appearance.

These are big machines either with one very powerful engine or with two or more, each, perhaps, of slightly smaller size. They carry two or more machine-guns, and some of the very big ones carry a 2-pounder quick-firer as well. They had some success against the slower types of French aeroplanes, but in only one instance, up to October last, did they defeat a British aeroplane, thanks to the speed of the average British machine. Owing to the superior speed of the machines used for fighting, the British aviators have frequently brought down more heavily-armed Germans, and even when the British machines have been slower they have scored on occasion by climbing to great heights and waiting for a German victim to come along at a lower level, where they have outmanœuvred him by diving and thus adding the force of gravity to the insufficient power of their engines.

Space is lacking to say anything about artillery fire-control from aeroplanes, either by signal-lamp or wireless,

but it may be taken that much good work has been done in this way.

The importance of the R.F.C. in our little Army may be judged by the fact that it is commanded by a major-general, with the usual brigadier-generals under him, and so corresponds to a division of infantry of 12,000 men.

Thus we may see that already the R.N.A.S. and R.F.C. are very important subdivisions of their own services, and we may estimate to some extent how enormously both will have to grow when there is time after the war to settle down seriously to develop the Flying Services.

But, above all things, let us get out of the heads of everybody concerned this absurd idea, to which some people still cling, that we should have a distinct Air Service run by an Air Minister, apart from either Navy or Army.

People are apt to forget that an aeroplane is only a vehicle which conveys either a sailor or a soldier, as the case may be.

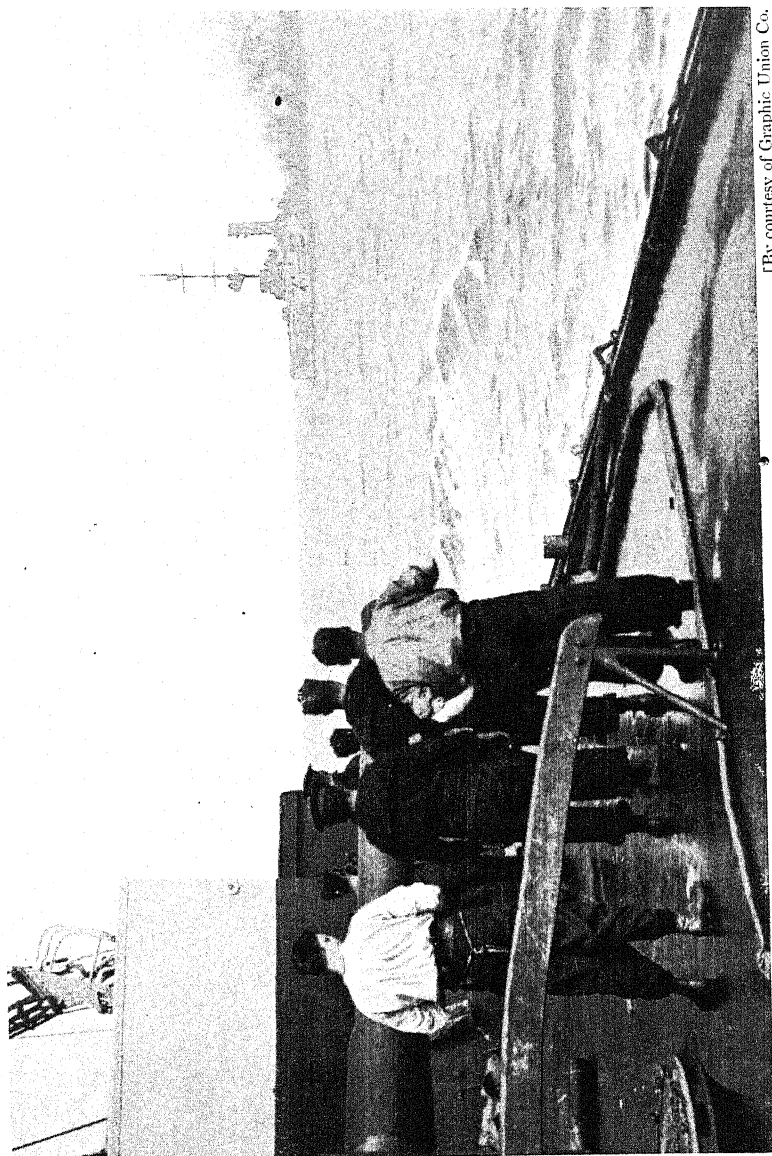
It takes years to make a sailor or a soldier who knows his job. It takes about as many weeks to make an aviator. And whatever aircraft do must be in co-operation with but subordinate to the particular service with which they are working. Certain new minor tactics have been evolved in connection with fighting in the air, but the principles of naval strategy and military strategy remain essentially unaltered, even though actions consequent thereon be influenced by aircraft. There is a vast difference between influencing actions and altering principles, and aircraft can only influence actions even when the day comes in which whole army corps can be transported at a hundred miles an hour and planted in the heart of an enemy's country.

Ultimately, when all is said and done, only two things can settle a war, either an army of occupation in the conquered country, or the caving-in of a country through sheer exhaustion consequent on the cutting off of supplies by the hostile fleet and/or army.

C. G. GREY

(Editor of "*The Aeroplane*").





[By courtesy of Graphic Union Co.]
"THE BATTLE OF THE BIGHT"; WATCHING THE END OF THE "MAINZ"

CHAPTER XI.

The Airship in Modern Warfare.

RECENT visits of Zeppelin airships to London and the eastern counties have at last drawn the attention of a considerable number of the British people to the possibilities of the modern airship.

Previous to the war little progress was made in this branch of aeronautics in Great Britain. Owing to the craze for economy, only small airships were produced, which were of little value for work over the sea and practically of no value for work over the land, as they cannot attain the height necessary to take them beyond the reach of gun-fire when carrying any weight. The Germans, however, in spite of repeated accidents to many ships, have pushed on with the construction of large airships of ever-increasing displacement, and it is interesting to conjecture the part they were intended to play in modern warfare.

Before the commencement of the war the opinion held by a considerable number of German airship officers was that the airship was useless for work over the land, seeing that she presented an enormous target and should be easily hit by any well-manned anti-aircraft guns over which she might pass. They held that she might be of use at night for the purpose of destroying bridges, railway stations, arsenals, etc., but for reconnaissance work, for which daylight was necessary, she was useless, and work of that nature should be undertaken by the aeroplane. They were generally of opinion that the proper sphere for the airship was over the sea, where she could observe all that was necessary without coming within range of ships' guns. This view was the more strongly held inasmuch as five Zeppelins, at least, could be produced for the cost of one destroyer, and except in bad weather they can perform scouting work far more efficiently than any destroyer or

light cruiser, while running no risk from attack from submarines and mines.

In the early days of the war it would appear that the Germans made some attempt to use their airships for daylight reconnaissance, but after one had been destroyed by artillery fire on the eastern frontier this seems to have been given up, as was to be expected, and they have confined themselves to night work, when over the land, entirely.

From reports received from Holland and Denmark it would seem that the Germans now have a considerable number of airships on patrol work around their coast, and it is in this direction, and scouting in conjunction with their Fleet when it puts to sea, that this type of craft can be most usefully employed. Until the German Fleet puts to sea it would appear that there are sufficient airships, in excess of those required for patrol duties, to enable some to be detailed for attacks on the eastern counties and London in favourable weather, and the point to be considered is how best to meet these attacks.

There is no doubt that a number of heavy guns and well-trained gunners should be able to defend any given locality in most weathers such as Zeppelins now wait for before commencing operations on our coast, but in a year or two we may expect to find those ships so airworthy and of such great speed that they can take the air in weathers which will make the task of destroying them by gun-fire exceedingly difficult. With low-lying clouds it is possible for an airship to get over her objective and drop her bombs without being seen by the gun's crews of anti-aircraft guns. Furthermore, it is not possible to have a number of anti-aircraft guns at all the vulnerable points in the United Kingdom, so that the employment of anti-aircraft guns cannot be looked upon as a sufficient guard against airship raids. There remains defence by aeroplane and airship.

There is little doubt that, while the aeroplane will always remain the faster type of aircraft, it will also always have considerably less endurance than the airship and will be able to carry less load in the way of armament. If an aeroplane sights a hostile airship by daylight and is of a fast-climbing type it should be possible for her to get above the airship and attack her from there in the same way that Flight-Sub-Lieutenant Warneford attacked the Zeppelin over Ghent. If attacked by aeroplane an airship might

either hide in any clouds which may be available or, by standing away from her assailant, endeavour to keep her under gun-fire for as long a period as possible before she can get overhead and drop her bombs. With the increased size of airships it should be possible to carry a very considerable armament on top of the envelope, and the attack of an aeroplane under these circumstances cannot be certain of success. In view of the large volume of fire that will probably be developed in these ships in the near future, it will most likely be necessary to armour aeroplanes, which will again affect their climbing power, endurance, and speed. It does not, however, appear to be the practice of airships to come within range of our aeroplanes by daylight, and in the darkness an aeroplane has little chance of finding an airship. When an airship passes over the country, even at a great height, the noise of her propellers is generally audible on the ground, and an aeroplane may start in pursuit, but as soon as she leaves the ground the noise of the airship's propellers is drowned by the aeroplane engine, and the pilot of the latter machine sees nothing and hears nothing. It would probably take him, at the very least, a quarter of an hour to climb to the same height as the airship, and by the time he has reached that height the airship will be some twelve miles away from where he first located her. There is no doubt that in the hours of darkness the odds are on the airship.

There now remains the method of meeting these attacks of Zeppelins with ships of a similar nature, and this, I think will be found, is the course that will eventually have to be adopted.

Throughout all our naval history, it has always been found necessary to meet one type of ship with another of similar type, and there is no reason to suppose that this practice will be altered because ships are floating in the air instead of on the water. When a German battle-cruiser squadron ventures to leave the German coast, a British battle-cruiser squadron, working from a favourable, strategic position, goes down and endeavours to bring them to action before their return—with what success is shown by the destruction of the *Blücher* in the last raid.

We should have large airships capable of performing similar duties when the Zeppelins raid our coasts. They should be airships so large and powerful that they can

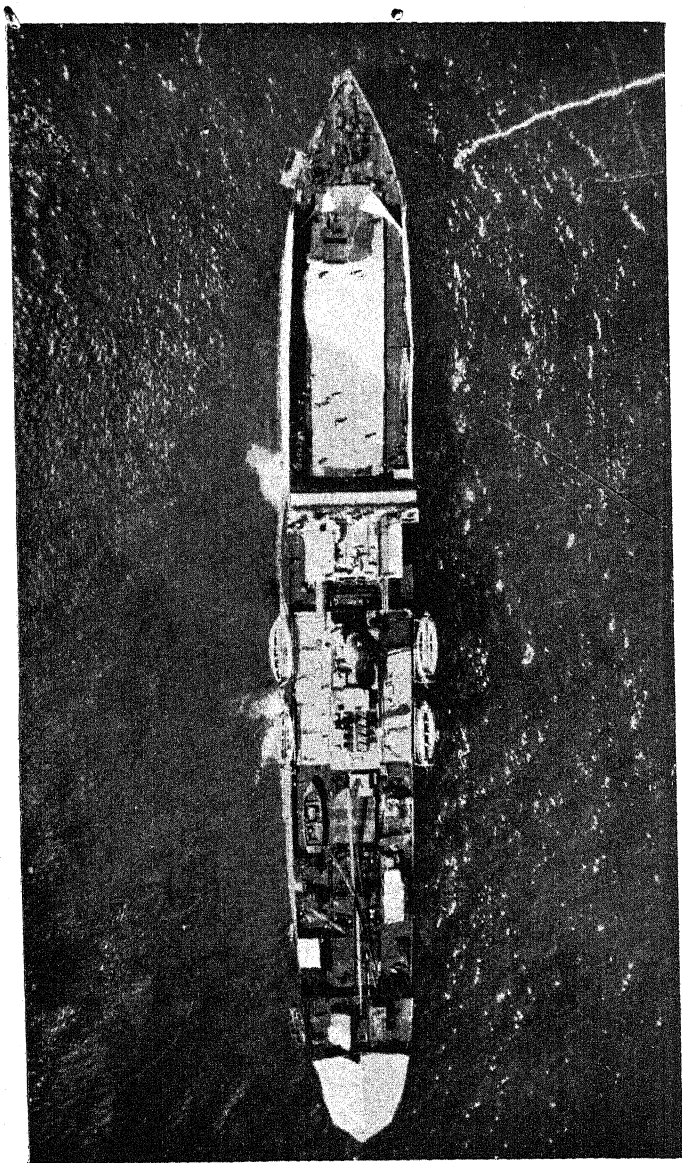
keep the air whenever a Zeppelin can, and whenever the weather conditions are favourable for airship operations our airships should be in a position either to intercept the raiders on the way over or to catch them before they return and bring them to action.

Should the war be a long one and no steps are taken in this direction, it is highly probable that German airships will improve to such an extent that they are able to cross the British Isles and attack our commerce entering the western ports, operating out of sight of land and beyond the radius of aeroplane work from the coast; and they should be able to do more damage to our shipping than that accomplished by submarines, while the armament of the large number of our liners now armed for purposes of self-defence will be useless against this form of attack.

In the event of this development taking place, it will only be by the provision of large airships capable of conveying our merchant ships into port that we shall escape serious losses.

The British public, as a whole, is very ignorant of aeronautics, and if the Navy League can carry on the same educational work as regards this new adjunct to the Fleet as it has done for the Navy in the past, it will be doing a good service, and may be able to ensure the necessary aircraft for defence being built before the German airships become a serious menace to our food supplies.

“PER MARE, PER AERA.”



[Photo by Photopress Co.]
BALLOON-SHIP "HECTOR" AS SEEN FROM A CAPTIVE BALLOON

CHAPTER XII.

Naval Engineering and the War.

DURING the past year of war we have had many experiences of the tests of the various parts of the war machine on land and on the sea ; and it may not be too early, perhaps, to consider, with the information available to the ordinary newspaper reader, how Naval Engineering has acted its part as concerns " the machine," " the man," and " the man in the making."

The war on land has been described as an engineers' war. Whatever success has been achieved by our enemies has been largely obtained by use of the productions of Krupps and other armament firms, and it has been aptly said that this war has now become a competition between Krupps and Birmingham.

Turning to the sea, while this is also to a great extent an engineers' war, in that the latest productions of the engineer and scientist are being used, it is being fought under very different conditions as to preparedness.

It has been customary in many quarters to give our foes great credit for scientific achievements. However correct this may have been in some cases, it is certainly a fact that in the matter of engineering as applied generally to ships of war, we have kept well ahead of them.

By the early adoption and building of the " all big gun " types of battleships and battle-cruisers, and the manufacture of heavy guns, we have obtained a substantial lead in this direction. By the early introduction and successes of the Parsons' and other turbine engines, the Yarrow, Babcock & Wilcox, and other boilers as steam-generators, and the successful use of oil fuel, we have also secured a great advantage. The use of the various appliances on ship-board—electric, hydraulic, and air-compressing machinery, anchor gears, feed and other pumps, steering gears, distilling apparatus, etc., of the latest types, in which British

engineers and manufacturers excel, has also been of great assistance ; while our superior ability to make use of these magnificent ships goes without saying.

The advantage of superior speed has probably never been shown to a greater extent than in the present war. To consider only the Falkland Islands fight on December 8th last, and the Dogger Bank engagement on January 24th, our Admirals were able to rapidly overhaul the enemy ships. On the former occasion our ships were able to choose the range that suited them best and sink those of the enemy in detail, themselves getting very slightly damaged. In the latter case, had it not been for the urgent desire of the Germans to avoid action, and to retire to the safety of their mine-fields, we should have been able literally to "make rings around them."

The words of the old song :

We never see our foes,
But we wish them to stay ;
They never see us,
But they wish us away—

were never more truly illustrated.

The recent developments of the use of oil fuel during the war, and the means taken to secure a good supply of this valuable material, are very interesting to consider.

When oil fuel is carried as well as coal, it has been found to be of the greatest advantage to use it when the furnaces using coal have got dirty, and the stokers are tired out from continuous efforts to keep steam ; or when necessary to obtain a burst of speed at short notice. Also the sole use of oil fuel in ships so fitted gives great advantages, in that high speed may be quickly reached and steadily maintained by far less effort, and by a smaller number of stokers than when using coal.

Besides the progress in ships and machinery, the development of our systems of submarines, of aeroplanes and hydroplanes, improvements in torpedoes of the Whitehead type, also of the methods of catching and destroying enemy submarines now referred to by our public men for the first time, have greatly strengthened our naval position.

At the beginning of the last war in which our Navy took an active part, that is, the war against Russia sixty-one years ago, our ships were to a great extent propelled by

sails alone. The flagships of all our foreign stations except two were sailing ships, pure and simple. Since then the sailing ship has gone from the Navy, and there are enormous differences even in the ships and their machinery engaged in the present war. Notwithstanding these changes, however, the spirit of "the man" remains as of old, so that we are able to reply in no uncertain voice to Kipling's question in "McAndrews' Hymn":

What I ha' seen since ocean steam began
Leaves me no doot for the machine; but what about the man?

We may safely say that "the man" in the form of the naval engineer has quite kept pace with the machine, if he has not outstripped it in the race for efficiency.

If it had not been recognised before this war, it has certainly now been brought to notice, that in a battle of engineers, in which our naval men have contributed so largely to our fighting efficiency, their position required reconsideration; and they have now in consequence been included as members of the military branch of officers, but of course not for command of ships.

In connection with previous reference to the high speeds of our ships in action, we must keep in mind the high skill and devotion to duty on the part of our engineer officers and engine-room complements generally. These results could only have been obtained by good training of the complements of the various ships, and by a high degree of courage and discipline.

It is pleasing to be able to record that with respect to the Falkland Islands fight Engineer-Commander H. Lashmore of the flagship *Inflexible* has been made a C.B. for his services on that occasion, while Engineer-Lieutenant-Commander Fraser Shaw of the *Invincible* has been promoted to the rank of Engineer-Commander. In this engagement, these two ships are said to have easily worked up to their record speed, while two older ships, the *Cornwall* and *Kent* of the "County" class, are said to have exceeded their trial speeds by something like two miles per hour.

In the Dogger Bank fight also our ships did well, easily overhauling the Germans. In connection with that engagement, Engineer-Commander D. P. Green was promoted to the rank of Engineer-Captain for services on

board H.M.S. *Lion*, several other promotions also being made.

We have lately been informed that Engineer-Commander Lashmore, C.B., has been made a member of the D.S.O. in recognition of his conduct when his ship, the *Inflexible*, was damaged by striking a mine, and was in danger of sinking. Other awards to members of the engine-room staff were also made.

It is to be regretted that the vacancy which Engineer-Commander Green was promoted to fill was caused by Engineer-Captain C. G. Taylor, M.V.O., having been killed in action on board H.M.S. *Tiger*. This officer had greatly distinguished himself in the training of young officers at Dartmouth College and the instructional cruisers under the Selborne-Fisher scheme; and when the war broke out, was in command of the Naval College at Keyham, which was at that time appropriated for the training of Lieutenants "E."

The training and efficient management of large bodies of men like our engine-room ratings, who have not been brought up in the naval service like the seamen, nor subjected to the drill and discipline of the marine corps, calls for great tact and judgment on the part of their officers; while the control and arrangement of duties for any number of men up to 500 and over, as in our large battle-cruisers, distributed all over the ship, from the capstan gear forward to the steering gear aft, at sea and in harbour, under constantly-changing conditions, requires executive ability of a high order.

With such a large collection of machinery of many kinds on board, with boilers literally by the dozen, in spite of unceasing vigilance and care, both at sea and in harbour, defects are constantly arising, requiring instant attention; while the examination, overhauling, and adjustment of working parts are necessary from time to time.

In order to deal with these matters promptly and efficiently, great skill is required to apportion the work among the many engine-room artificers of the various trades carried, so that the most important matters are seen to first by the most suitable persons; that the efficiency of the ship shall be interfered with as little as possible; and that watch-keeping and other duties may still be properly carried out.

The fact that our ships are constantly ready for service when required shows how well these duties are carried out by all concerned.

We have thus far only considered the duties of the engineer officers employed on board ship and taking an active part in the war at sea ; but it appears hardly right that those who are doing their duty on shore in preparing the war machine for use should be overlooked, as they include between one-fourth and one-fifth of those officers shown on the Navy List, and would possibly prefer to be at sea.

We may not refer to the various duties on which these officers are employed ; but they are of the most important nature, not only in connection with service at the Admiralty, the Dockyards, overseeing the manufacture of propelling and auxiliary machinery, but in the preparation of all kinds of war material. In connection with this it may be mentioned that Engineer-Commander S. Hardcastle is the inventor of one of the most important developments of the Whitehead torpedo, while Engineer-Lieutenant and Squadron-Commander E. F. Briggs of the R.N. Air Service, at present a prisoner of war in Germany, held until quite recently the record for the highest British flight in an aeroplane, and was taken prisoner after a most daring and successful attack on a Zeppelin factory in southern Germany.

And now a few words about " the man in the making." This war has overtaken us in the middle of a most important change in our system of training officers, especially of those for the engineer branch. There are probably many who consider we are fortunate in that the change had not gone far enough to make any considerable alteration in the complements of the existing engineer officers of ships.

These may be right : we shall probably never have engineer officers better qualified for their particular duties than we have at present ; but we shall probably have as good, and our future officers of this branch will not suffer from the handicap of being engineers only. In the meantime we know that the new system has already produced a small number of excellent engineers, also other good results, not perhaps so readily seen.

Attention has recently been called in some of the leading daily and other newspapers to a new system of training

engineers for the Australian Navy. This system appears to consist of taking young engineers who have completed a four years' course of training in an engineering college, giving them a year's training in Naval ships, and then entering them in the Navy as junior engineer officers.

Without a complete knowledge of the details of this scheme, it is impossible to criticise it thoroughly; but it is evident that although it may possibly produce good engineers, they will not be so well adapted for general naval work as our officers trained under the Selborne-Fisher scheme. We are in a fair way to get rid of all the difficulties of the older systems in our own Navy, and it appears strange that the Australians apparently wish to perpetuate them.

We have now something over 2,000 young officers afloat, trained under the new scheme; and with their scientific and engineering training, the knowledge of these subjects they constantly bring to bear on the various appliances on board ship must tend to a better use of them than previously.

It would appear to be distinctly unfair to put a cadet or midshipman, fresh to battleship life, in a place so full of machinery as, say, a modern gun-turret, where he must hold some sort of responsibility, unless he knows something of the objects around him, or is in a position to pick this knowledge up quickly. By the modern system of training he is enabled to get a grasp of his position much more readily than he otherwise would, and to look on many of the fittings as already old friends.

Those croakers who told us that the "Jacks of all trades" we are turning out at Dartmouth would prove to be a melancholy failure have already learned that they were wrong. We hear reports on all sides of the excellent qualities of our midshipmen. The midshipman, especially when fortunate enough to command a boat, has been found to possess the same qualities as of old as to daring, the ready acceptance of responsibility, and the efficient performance of his duty.

A few words more with respect to the present engineers: we know that in all training establishments and ships these officers have been from the first, and are now, working loyally and devotedly in the training of the cadets and midshipmen, although some of these young officers are

destined to displace them: perhaps it would be better, to say "because" they are to displace them.

We are told by some of the croakers already referred to that there will be a difficulty in getting a future supply of engineer officers under the new scheme, because of the unpleasant or disagreeable conditions of engine-room life. Although this is open to doubt, we know that these conditions are rapidly changing, and that a modern oil-fuel boiler-room is a very different place to the inferno of a stokehold with coal in use; also that the surroundings of a modern turbine-engine room make a very different set of conditions to the old reciprocating-engine room, of which the old-time engineer student at Keyham College used to sing in his "Farewell" song:

A life in an engine room—
 An odour of oil and grease,
 A rattle of valves and rods,
 Never a moment's peace—
 When I think of this prospect bright,
 I sing as I pipe my eye,
 "To a student's name and life
 I am sorry to say 'good-bye.'"

In fact, it seems very probable that in the near future the conditions of the engineer specialist's life below will not differ largely from those of the gunnery and torpedo specialists.

It appears then that in this, our first real test of a steam Navy in time of war, the officers and men in charge of the new system of propulsion have proved themselves to be as capable in their line as the old sailormen, who not only fought their ships but managed their propulsion as well, were in theirs. We have also every reason to believe that when the new sailormen, who in their turn will propel their ships as well as fight them, come along and take charge, they will be equally successful, and prove to be worthy followers of both lines of their predecessors.

J. LANGMAID
(Engineer-Captain, R.N., retired).

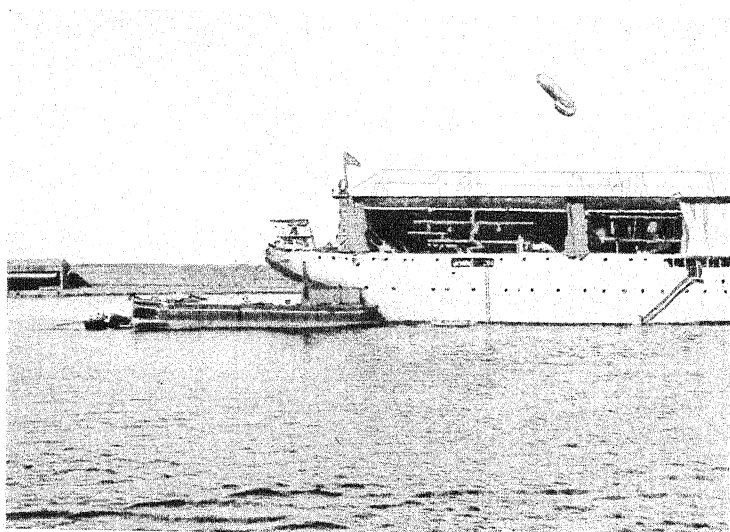
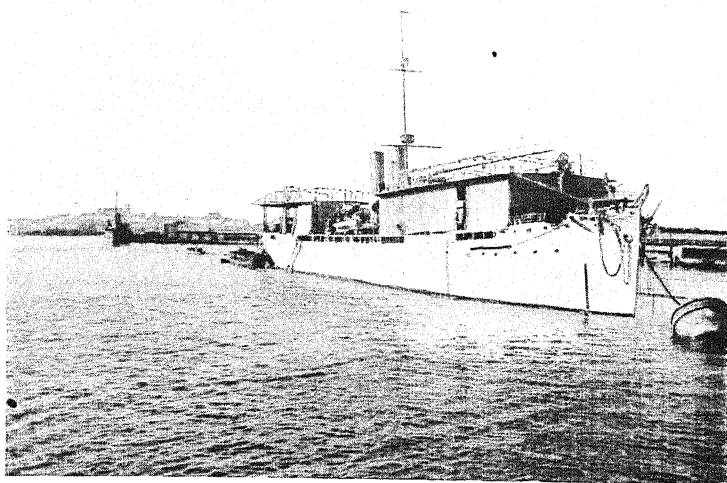
CHAPTER XIII.

America's New Armada.

"I do not know anything more discouraging than the announcement that the one great State in the world which is so remote and so powerful that one might think it might free itself from the hideous and bloody burden of war—I know nothing more disheartening than the announcement that the United States of America is about to embark on a huge armada, destined to be equal or second only to our own, which means that the burden will continue on all other nations and be increased exactly in proportion to the Fleet of the United States. I confess that it is a disheartening prospect that the United States, so great and intelligent a country, so happily remote from European conflicts, should voluntarily in these days take up a burden which, after this war, will be found almost to have broken our backs."—Lord Rosebery's *First Rhodes Lecture, University of London, November 16th, 1915.*

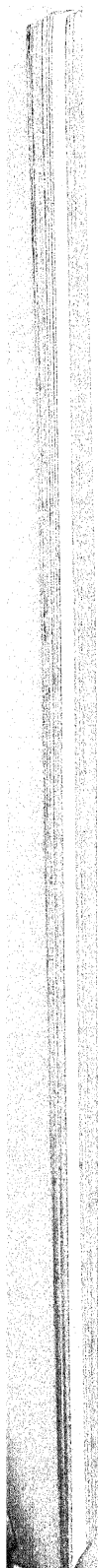
AT the end of the article on "The Most Desirable Dreadnought" in the November issue of *The Navy*, mention was made of a report that the battle-cruiser type was to be included in the new programme of construction for the United States Fleet. In the *Daily Telegraph* of November 9th last, Mr. Archibald Hurd set out for the first time the full provisions of the new American naval programme. As forecasted, it does include the battle-cruiser species, but instead of only making provision for one financial year, as was the normal American custom, the new shipbuilding scheme is framed on a five years' basis, beginning in 1917 and terminating in 1921. No less than 185 warships of all types, ranging from enormous capital-units down to auxiliaries and gunboats, are incorporated in this vast project. Its actual magnitude will first be appreciated through the Tables attached to this article. In scope and intention, the new American quinquennium of naval development can only be compared to the famous Fleet Laws of Germany.

As remarked above, it has hitherto been the custom for the United States Navy Bureau to frame its demands on a year-to-year basis, as also was the rule with our own Navy Estimates. Our system was undoubtedly haphazard



A SEAPLANE-CARRIER

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and typically British in its limited range of prevision. Yet the Navy built up on this loose-jointed plan has certainly stood the decisive and fiery proof of warfare. On the other hand, the German Navy, modelled with meticulous care to long-forecasted Fleet Laws, has proved a most dismal deception as a marine fighting-machine. As the natural guardian of Germany's sea-commerce, the enemy's Fleet has proved an utter failure. The Hamburg shipping owners have acquired the bitter knowledge that the Fleet they so strenuously supported is nothing more or less than a "gold-brick" Navy as far as their own interests are concerned. "The proof of the pudding lies in the eating thereof," and Germany's pudding has turned out to be a nautical "humble pie." Practical results discredit the enemy's system of ante-dated Fleet Laws, yet we find America now abandoning the British annual form of Estimates for the discredited German plan.

Although America has made this change of policy, it is rational to doubt whether the United States Government will ever see this vast project attain its forecasted maturity in 1921. It is an easy thing to outline a vast armada on paper and to predict its gradual development in annual stages up to full fruition. Many nations have pursued such a course, defining and ante-dating the limits of their naval ambitions. But Germany alone succeeded in bringing her plans to their full meridian because she alone had the foresight, not only to indicate the final end, but also to evolve the means for its attainment. Other countries fixed their destination, but only Germany thought out the means of "getting there." America may adopt the German system of Fleet-building, but can she evolve the machinery essential for final success?

Accordingly, there are two questions to be contemplated: *Firstly*, how did Germany fulfil her Fleet Laws, and, *secondly*, can America imitate Germany's methods for working out great Fleet-programmes? It is difficult to analyse the essentials required for success, but four things do seem to be necessary. On the abstract side, there must be "permanency of policy" backed up by "national conviction." On the concrete side, there must be constructional and financial ability to carry the project through to its anticipated finality. Does America possess or can she create these four essentials?

"PERMANENCY OF POLICY."

Germany carried out all her schemes in their entirety and even enlarged on her original projects because she had the required "permanency of policy." In Mr. Churchill's words, "she marched unswervingly across the lifetime of a generation." Her naval administration possessed full political stability, it was continuously directed by one permanent chief, Von Tirpitz, backed up by the ruling caste of Junkerdom. Government in Germany is not completely democratic. As a comparison, take the case of France, where the nation is governed on a republican and truly democratic plan, as are the United States. Political instability has resulted in constant vacillations of French naval policy. Within two years, no less than six French Ministers have held the naval portfolio, and at least four of these political chiefs enunciated long-dated naval programmes for the French Navy. But no scheme ever survived its sponsor's departure from the Rue Royale. The United States Governments are undoubtedly more stable than the French Ministries, but popular government on a democratic basis has never secured permanency of naval policies. Political pendula swing, the "other side" comes into office, and if a long-dated naval programme is in hand, the new administration amends and usually cuts it down, probably out of "pure cussedness" and for the sake of being contrary.

With all respect to the present Secretary of the United States Navy, one can hardly say that Mr. Josephus Daniels possesses the administrative talent of a Tirpitz. Even if he did, the American system of government denies him the staying-power to see his programme carried out to the last cotter-pin. With Germany, "The Eternal Tirpitz" was always at the helm. No administration can entail its political schemes, and who will guarantee that Mr. Daniels's successor in office will refrain from amending the present Programme in accordance with his own views? The present United States administration came into power with the "Peace, Retrenchment, and Reform" slogan on its lips and the concomitant promise to reduce "unreproductive expenditure on armaments." Events in Europe controverted this political creed, and one wonders, not without cause, whether the new American Navy and Army Pro-

grammes are genuine in intention or influenced by the imminence of the Presidential Elections in 1916. The gigantic scope of the new naval programme should prove an irresistible attraction for the financial pruning-knife when the present and artificial prosperity of American trade passes away, unless all political parties and the people are convinced that the scheme is vitally required for their country's defence. Even the American authorities themselves seem a little doubtful about the vitality of the new Programme. The largest number of warships—55, or about 33 per cent. of the whole programme—are to be laid down in the first year of the scheme, a method of making as much hay as possible while the political sun shines.

“NATIONAL CONVICTION.”

“National conviction” is the *raison d'être* of all Navy Leagues. Unless Governments of all creeds are backed by a people convinced as to the utility of naval defence, no scheme of shipbuilding will survive a change of administration. Here again let us examine the case of Germany and see how the German people, a military nation, acquired the “national conviction” that they needed a powerful Fleet. Both the Kaiser and Tirpitz knew that apathy would be fatal to their schemes, and the people were immediately subjected to a process of “naval education.” Tirpitz had the best possible advertising medium, an Imperial mouth-piece coining catch-phrases at appropriate moments. A Press Bureau was installed at the Marineamt to deluge a subservient Press with gratuitous “copy.” The Flottenverein, fostered by Imperial and thinly-disguised official patronage, enrolled over a million members. It represented the pulse of “national conviction.” Every instrument of publicity was brought into play, and patriotism was prostituted for a campaign of scurrility and calumny directed against ourselves. “Every country gets the Press it deserves” and both the German Press and the German people helped Tirpitz in his appeal to their baser passions, the hate and fear of England's naval might. When public interest flagged and “permanency of policy” was endangered by political events, the nation was adroitly oxygenated with international incidents such as the famous

Agadir episode. Despicable as all this mechanism was, it lacked no ingenuity.

Can we envisage the United States following such a plan? Can one see an American President uttering phrases on "marine-futurism" and "tridents" from a launching platform? The United States Navy League is an organisation of undoubted "push and go," but it is no Flottenverein, and one doubts if it can educate, sustain, and stimulate popular attention in the Five Years' Programme. American papers have an amiable weakness for tweaking the lion's tail, but one cannot imagine them, the unfettered exponents of public opinion, giving countenance to a perennial campaign of mud-slinging aimed at us, such as Tirpitz's Slave-Press carried on. Nor does one think that the people of the United States, independent and progressive in spirit, would tolerate appeals made to their imagination through hate and fear. We have a widespread "national conviction" that we must put every man into the field we can spare, a conviction which the British Press has greatly helped to build up. Neither "hate-poems" nor fear of Germany have played any part therein; it has largely been built up on a cleaner form of patriotism, an appeal to the national sense of duty. In all their discussions of defence questions the American papers of repute have had little to do with the raising of bogeys, even of the Asiatic variety.

Another factor has been the example set by ourselves. The inestimable value of a supreme Navy in war-time has been proved to the world by the British Navy, and the lesson has not been lost on our friends across the Atlantic. "Unreproductive expenditure on armaments" is—or rather was—a favourite phrase with our Parliamentary "Little Navy" bilge-pumps, but America knows now that British Navy Estimates were one of the soundest commercial investments ever made, not only for the insurance of our own commerce, but also for the benefit of American trade. She has also taken to heart the fate of unprepared nations when attacked by a strong and unscrupulous opponent. National enthusiasm may support the new Programme, but will a novelty-loving people see the thing through to the end? At the end of this huge conflict of armaments, memory may become blunted, revulsion may follow on enthusiasm, and popular opinion in America may become averse to the whole naval project unless "national

conviction" is so strong that it will weather the anti-climax.

FINANCIAL AND CONSTRUCTIONAL ESSENTIALS.

Little can be said of America's economic power to finance this scheme. But it is well known that, in the summer of 1914, American trade was preparing for a period of depression. The anticipated "slump" seemed to be accelerated by the declaration of war and the closing of European markets. When the British Navy secured freedom of sea-trading for the Allies and neutral States, American trade began to revive, and now it is on the crest of a huge commercial "boom." Part of the huge war-profits made in the States are being invested in the new Fleet Programme. But at the end of the war the artificial stimulus of great war-contracts and exaggerated exports will be withdrawn, and then one may expect America to experience the full effects of her postponed "slump" in an accentuated degree.

Taking construction in separate years (as shown in Table A), it does not look as if the annual programme of ship-building materially exceeds past American programmes except for the addition of the battle-cruisers. For the past four or five years, two Dreadnoughts have been annually approved for the United States Fleet,* and the series is maintained in the new shipbuilding scheme. Even so, the American shipyards have been unable to assimilate a brace of battleships per annum, and ships under construction are in arrears. A striking sidelight has just been thrown on the relationship between the financial and constructional difficulties encountered with new American warships. Three firms were asked to tender for the construction of the battleships authorised at the last Congressional Session, and after their estimates had been examined, it was found that they exceeded the sums voted, owing to the increased cost of materials. It is now proposed that the ships should be laid down in Government yards, a course entailing a year's delay in the preparation and equipment of the building-slips.

The enormous estimated cost of the new American units has already attracted attention. After allowance has been

* In 1914, the Programme rose to three ships through an abnormal occurrence—the sale of two battleships to Greece. Funds were thus provided for the laying down of a third ship.

made for increased cost of materials and labour, it is patent that the U.S. Bureau of Construction and Repairs contemplates the building of mastodon-ships. Even if we concede the high constructional rate of £120 per ton, the new American Dreadnoughts must be units verging on the 40,000 tons mark. Recent experience has shown that the American authorities under-estimated the price of new ships. Three million pounds have been allotted to each of the new Dreadnoughts of the 1917-1921 Naval Programme, but it is doubtful if the ships can be built to the original designs for this sum with the rates of materials and labour on the upward grade.

The cost of our own battle-cruiser *Tiger* was estimated at £2,563,000, a record in size and cost for a single unit of our Fleet up to 1914. America contemplates battle-cruisers costing a million more than our *Tiger*. With a length of nearly 800 ft. and a beam between 80 and 90 ft., the United States versions of the *Lion* type will displace 35,000 tons and will steam at 35 knots with engines of 170,000 to 200,000 h.p.*

The American system of armouring battle-units is now based on the principle of "all or nothing," i.e. the thickest armour or none at all. The new battle-cruisers would require a water-line armour belt about 550-600 ft. long, 13 ft. deep, and 14-16 in. in thickness. The weight of this protection would be prohibitive, and one accordingly foresees that the American designers cannot embody the thickest armour in the new battle-cruisers. Compromise is excluded by their principles and therefore they must accept the alternative and have no armour at all on the water-line, the weight saved being probably cast into engine-power.

If this is so, warship development has passed through the full circle and Benedetto Brin's huge and unarmoured *Italias* of 1877 have been reborn in America. The unarmoured battle-cruiser predicted by Vice-Admiral Sir Reginald H. S. Bacon about five years ago as the centre of a new type of naval Fleet-formation has also materialised. Can the United States even maintain such costly ships? The *Lion* burns 950 tons of coal *per diem* at her full

* The writer refused to accept these figures at first sight, and enlarged our *Lions* to 35,000 tons and 35 knots speed, to equal the reputed United States design, so as to calculate h.p. by Lovett's Formula. In round figures, the estimated h.p. for the enlarged *Lion* was 163,000 h.p., and this was probably an under-estimate.

70,000 h.p., an engine power which would only develop about two-thirds speed for the monster United States battle-cruisers. Allowing for the higher thermal efficiency of oil-fuel and the reduction of fuel consumption by electrical transmission, the American ships must consume at least 1,200 tons of oil every day at full power. Furthermore, the adoption of designs approaching 800 ft. in length and 40,000 tons in displacement would seem to raise the docking question in a new and most formidable shape, especially as regards the width of the Panama locks.*

Warship design does, to a great degree, reflect a nation's inventive power, engineering skill, and military science. America has nothing to fear from such a test, for her battleship designs from the *Michigan* to the *California* have displayed a standard of consistent excellence in all three qualities. The new Fleet Programme is no servile imitation of Germany's methods. Uncle Sam is perfectly capable of solving his own defence problems without grafting foreign ideas on to his Fleet. The fundamental defect in the new American Naval Programme is this; it is not the fruit of mature consideration by the War Staffs of the United States Navy and Army. *It is the political design of an ephemeral politician, Mr. Josephus Daniels, the present United States Secretary of the Navy.* Commenting on President Wilson's speech at the Manhattan Club, Mr. Bernard Walker, the Editor of the *Scientific American*, says:

"The proposed programmes, both military and naval, have in common a fundamental and very grave defect, namely, that they represent not the matured plans of the naval and military experts who alone are qualified to judge in the matter, but rather the proposals of the purely civilian minds of the Secretary of the Navy and the Secretary of War. In the very nature of these things, these plans must be immature, being based largely on theories to which no trained military mind can subscribe."

It must be noted that Mr. Bernard Walker, always a keen and competent critic of naval matters, and an old advocate of a strong American Navy, does not view the Five Years' Programme with unqualified approval. He

* Since the foregoing notes were written, it has been officially announced that the U.S. Navy Department does not intend at present to enlarge its future battleship designs beyond the 32,000-tons displacement of the *California* class. Another explanation must therefore be sought for the high estimated cost of the ten new battleships provided for in the 1917-1921 Naval Programme.

considers it more advisable that the present and immediate deficiencies in personnel and equipment should be remedied before embarking on the 1917-1921 scheme.

On all scores—permanency of policy, national conviction, financial and constructional ability—the balance goes down against the probability of the United States Naval Programme ever attaining maturity, or, for that matter, ever being initiated. If we consider the above opinion of the *Scientific American's* Editor and remember the forthcoming Presidential Elections, it looks as if the new Programme had been created, not as a *bona-fide* scheme of national defence, but as a political expedient, designed by a political and non-expert naval chief, to serve the political ends of his party. If the present United States Government survives the elections, the Naval 1917-1921 Programme will have served its designed end. On the other hand, if there is a change in administration, the new Government will hardly adopt the Programme *in toto* as a political inheritance.

Mr. Daniels's party came into office pledged to the reduction of expenditure on naval and military defences, a policy shattered by the first gun shot in Europe. The ghost of the old "Little Navy" pledge must be laid before the elections. The magnitude of the naval project proves the old truism that the new convert is always more fervent than the already convinced. The political inspiration of the United States Naval Programme, and its probable fate, when taken in conjunction with the 1916 Presidential Election, are well summed up by the old rhyme:

"When the devil was sick, the devil a monk would be;
When the devil was well, the devil a monk was he."

*** Without Ammunition Ships.**

TABLE D.

To complete ships authorised, viz.,					£
7 Battleships,	}	..	..	..	9,700,000
11 Destroyers,					
1 Destroyer-Tender					
22 Submarines					
1 Submarine-Tender					
2 Fuel Ships					
1 Storeship					
1 Transport.					
To build 185 new ships .. .. .	..	..	..	..	84,593,000
For Aviation .. .. .	..	..	..	..	1,200,000
For Reserve of Ammunition .. .. .	..	..	..	..	5,000,000
Total for increase of Navy .. .. .	..	..	..	..	£100,493,000
Total for maintenance .. .. .	..	..	..	..	£103,000,000
Total for five years .. .. .	..	..	..	..	£203,493,000
Average annual Vote .. .. .	..	..	..	..	£40,698,600
First credit demanded .. .. .	..	..	..	..	£43,500,000

TABLE E.

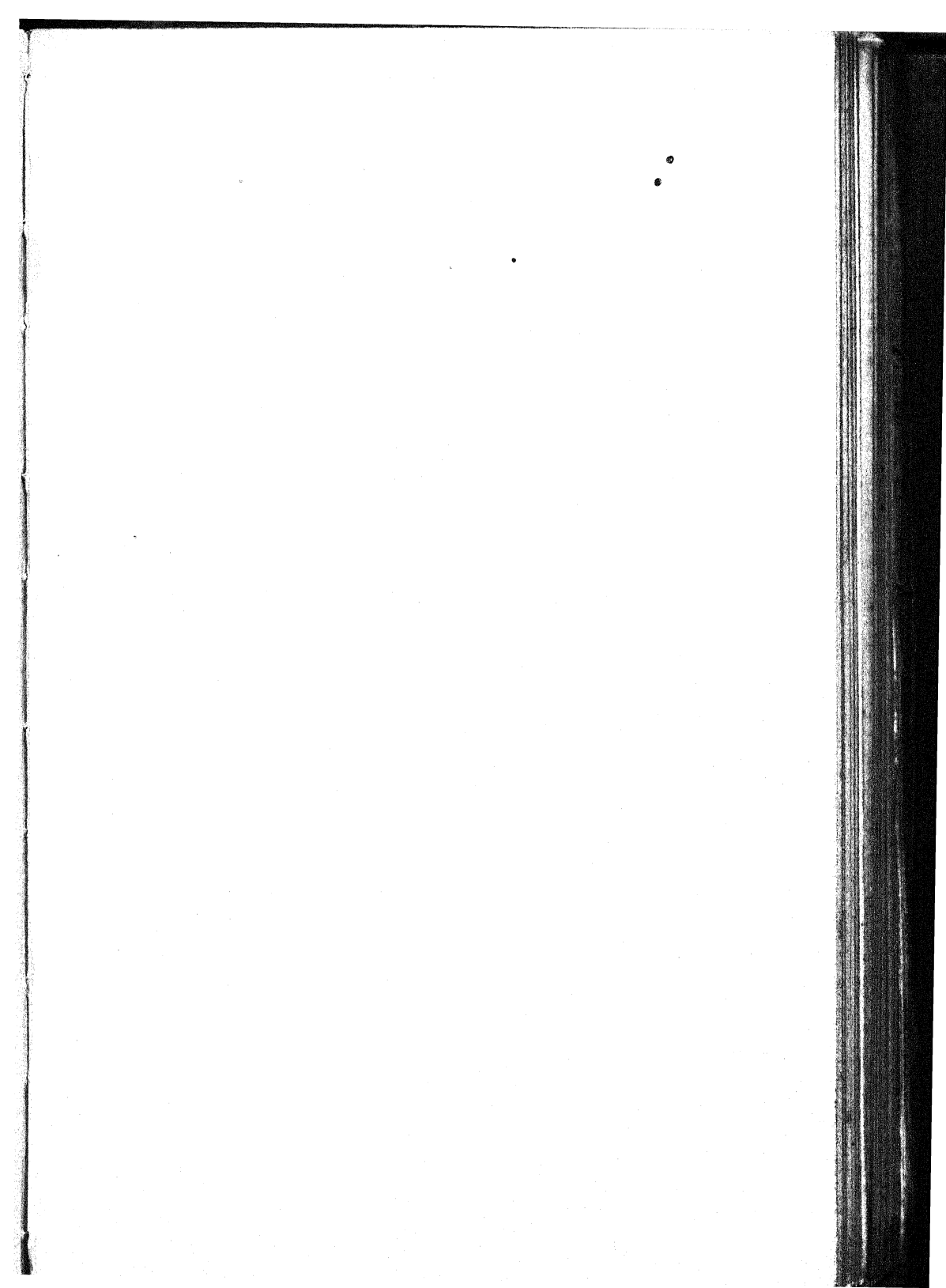
Personnel:

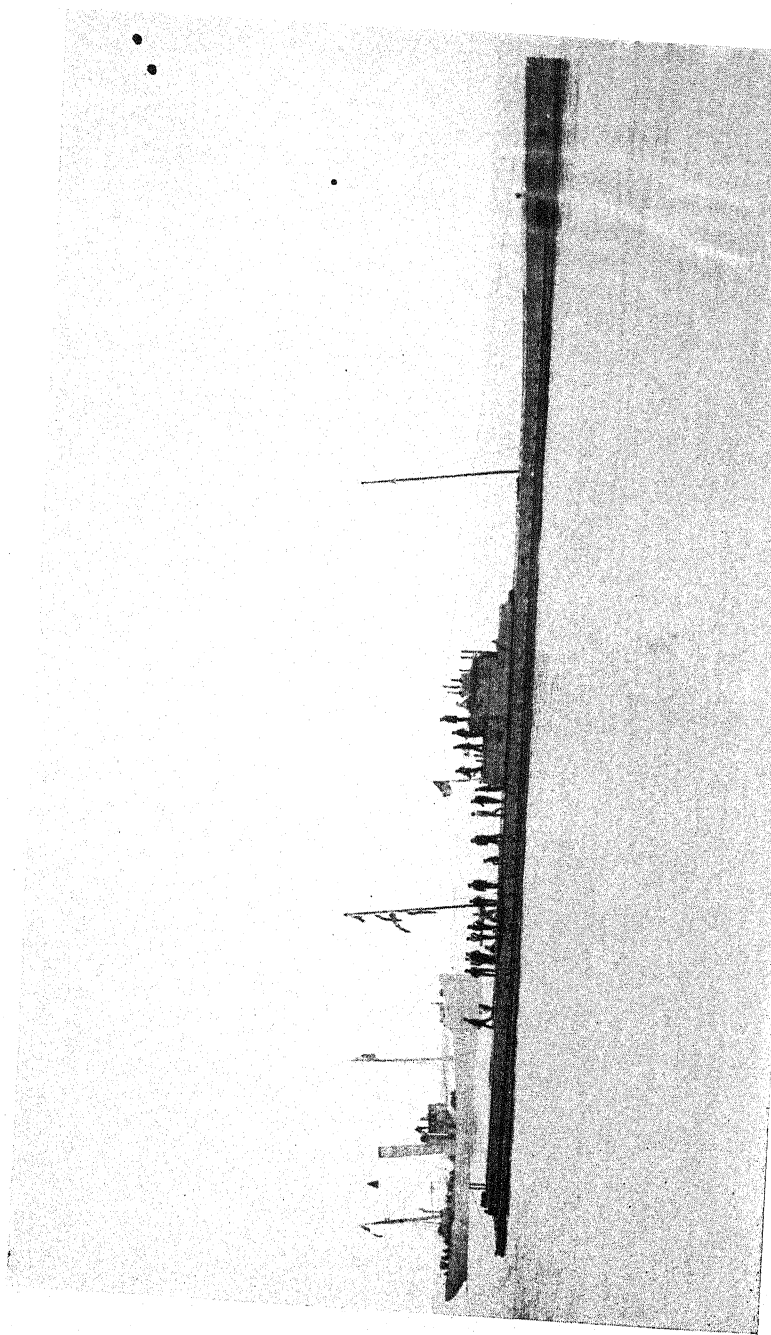
To be increased by	250 midshipmen
	7,500 sailors
	2,500 apprentice seamen
	1,500 marines
	<u>11,750</u> Total increase

Docks, Yards, Harbour Works, &c. : No figures available.

Policy.—"To keep in full commission all battleships under 15 years of age, all destroyers and submarines under 12 years of age, one-half the number of cruisers, all the gunboats, and the necessary auxiliaries for the Fleet, as well as to provide adequate complements in reserve for the remaining ships of military value and the shore stations."

ANONYMOUS.





GERMAN SUBMARINE "U-36" AND ARMED TRAWLER "W-3"

PART II.

OFFICIAL DOCUMENTS RELATING TO THE ROYAL NAVY :

ACTS OF PARLIAMENT,
CONVENTIONS,
ORDERS IN COUNCIL,
DESPATCHES, ETC.

I.

ROYAL MARINES ACT, 1914.

*An Act to extend the term of service of the Royal Marine Force
during the present War.* [November 27th, 1914.]

BE it enacted, etc. :—

1. Section five of the Royal Marines Act, 1847, which enables the term of service for a marine to be prolonged if the term expires whilst he is serving on a foreign station, shall during the continuance of the present war apply, and shall be deemed always to have applied, wherever a marine may be or may have been serving at the expiration of his term of service, with the substitution of a reference to the Admiralty for the reference to the commanding officer on the foreign station.

2. This Act may be cited as the Royal Marines Act, 1914.

II.

NAVY AND MARINES (WILLS) ACT, 1914.

An Act to enable the Admiralty to dispense with compliance with the requirements of the Navy and Marines (Wills) Acts, 1865 and 1897, in the case of Seamen and Marines dying during or in consequence of the present War. [November 27th, 1914.]

BE it enacted, etc. :—

1. Notwithstanding anything in the Navy and Marines (Wills) Acts, 1865 and 1897, the Admiralty may, in the case of a will made by any person being or having been a seaman or marine who may have died or may hereafter die during or in consequence of the present war, pay or deliver any wages, grant, or other allowance, or other money payable by the Admiralty, or any effects or money in charge of the Admiralty, to any person claiming to be entitled thereto under such will though not made in conformity with the provisions of the said Acts, if the Admiralty are of opinion that compliance with the requirements of those Acts may be properly dispensed with.

2. This Act may be cited as the Navy and Marines (Wills) Act, 1914.

III.

NAVAL MARRIAGES ACT, 1915.

An Act to provide further facilities for the marriage of officers, seamen, and marines borne on the books of any of His Majesty's ships during the continuance of the present war.

[March 16th, 1915.]

BE it enacted, etc. :—

1. Where, during the continuance of the present war, one of the parties to an intended marriage is an officer, seaman, or marine borne on the books of one of His Majesty's ships, and the parties to the intended marriage have duly fulfilled all the conditions required by law for enabling them to be married in any particular place of worship or in any particular district in the United Kingdom, then, if the officer, seaman, or marine obtains from the officer commanding the ship on whose books he is borne a certificate that owing to the exigencies of the public service the officer, seaman, or marine cannot be allowed to proceed to that place of worship or to that district, the marriage may be lawfully solemnized or contracted in any other building in the United Kingdom in which marriages may lawfully be solemnized or contracted, as though the parties thereto had duly fulfilled all the conditions required by law for enabling them to be married at that building: Provided that where apart from the above provision the marriage could not have been solemnized elsewhere than in a place of worship of a particular denomination, nothing in the said provision shall be construed as authorising the solemnization of the marriage elsewhere than in such place of worship.

2. Where, during the continuance of the present war, one of the parties to an intended marriage is an officer, seaman, or marine borne on the books of one of His Majesty's ships, any certificate of the publication or proclamation of banns or of notice of marriage issued for the purpose of the intended marriage shall, notwithstanding anything in any other Act, continue to be valid for twelve months, and the marriage may accordingly be lawfully solemnized or contracted at any time within those twelve months.

3.—(1) This Act shall be construed as one with the Naval Marriages Act, 1908.

(2) This Act may be cited as the Naval Marriages Act, 1915.

IV.

SCHEME FOR ALLOWANCES FROM NAVY AND ARMY FUNDS TO DEPENDANTS OF DECEASED SAILORS AND SOLDIERS.

INTRODUCTORY NOTE.

THIS paper sets out in general terms the principal features of the scheme approved by the Government for allowances from Navy and Army Funds to the dependants (other than widows and children) of sailors and soldiers whose deaths are due to the present war. It must be clearly understood that the Admiralty Orders and Army Orders and the Regulations made or to be made will alone be the documents that will be decisive as to any points that may arise in particular cases, this paper being no more than a presentation to Parliament of the main lines of the scheme.

T. J. MACNAMARA.
H. W. FORSTER.

December 1st, 1915.

SCHEME.

I.—FATHERS, MOTHERS, &c.

1. For a parent or parents wholly dependent on the sailor or soldier, an allowance to be given not exceeding in any case (whether for one parent or two) the amount of ascertained dependence prior to mobilization or entry into the Service if later, or the widow's pension appropriate to the sailor's or soldier's rank (10s. a week for the lowest rank with no increase on the score of age), whichever be less. The allowance to continue so long as no other means of support (*e.g.*, other children reaching full age) exist.

2. For a parent or parents incapable of fully supporting themselves, and partly dependent on the sailor or soldier, an allowance, not exceeding the amount of ascertained dependence prior to mobilization or entry into the Service if later, or 5s. a week, whichever be less, subject to periodical review as to the continuance of the incapacity.

3. For any other dependant who is wholly or partly incapable

of self-support, an allowance not exceeding the sum prescribed in the preceding paragraph, subject to periodical review as to the continuance of the incapacity.

4. Old age pension to be reckoned in diminution of above benefits.

5. For able-bodied dependants, other than parents coming under paragraph 1, a grant by way of gratuity or weekly payment, not exceeding in all a year's pay of the sailor or soldier, or a year's allowance at the rate at which separation allowance and allotment were paid for the 26 weeks after the notification of death, whichever be greater, to be given at the discretion of the Admiralty or War Office.

II.—WOMEN WHO HAVE BEEN ENTIRELY DEPENDENT ON A SAILOR OR SOLDIER FOR THEIR MAINTENANCE AND WHO WOULD OTHERWISE BE DESTITUTE, AND CHILDREN OF THE SAILOR OR SOLDIER IN THEIR CHARGE.

6. If there are no children of the sailor or soldier and the woman is in good health, a grant by way of gratuity or weekly payment, not exceeding in all the amount of a year's allowance at the rate at which separation allowance and allotment were paid for the 26 weeks after the notification of death, to be given at the discretion of the Admiralty or War Office.

7. If there are no children of the sailor or soldier and the woman is wholly or partly incapable of supporting herself from infirmity or age, an allowance of from 5s. to 10s. a week according to circumstances to be given, renewable from time to time on medical certificate. When the disability ceases a terminal gratuity not exceeding the amount of 26 weeks of such allowance may be given.

8. If there are children of the sailor or soldier in her care, an allowance of 10s. a week to be given in addition to the usual allowances for the children. When the last child reaches the age limit or dies, the woman, if in good health, to receive a terminal gratuity of £13 (half the annual value of the allowance). If she is wholly or partly incapable of supporting herself, she may be granted an allowance of from 5s. to 10s. a week, according to circumstances, renewable from time to time on medical certificate, and on the cessation of the disability a terminal gratuity not exceeding the amount of 26 weeks of such allowance.

9. Old age pension to be reckoned in diminution of above benefits to the woman (not to the children).

III.—ADMINISTRATION.

(a) The claim to a grant of allowance or gratuity after the sailor's or soldier's death will rest in the ordinary course on the

establishment during his lifetime of a claim to separation allowance as a dependant, and in the absence of such established claim a special investigation will be made, and very complete evidence will be required. Grants will be subject to the same conditions as widows' pensions in regard to the circumstances of the sailor's or soldier's death, forfeiture, etc., so far as such conditions are applicable.

(b) All the awards referred to will have effect after the expiration of the 26 weeks for which separation allowances are continued after the notification of the death of the sailor or soldier.

(c) This Scheme provides only the grants to be made from the Votes of the Admiralty and War Office, not those which may be made out of funds at the disposal of the Body proposed to be established by the Bill now before Parliament. The duty of determining the facts on which a grant may be based will be among the duties of that Body, and the Admiralty or War Office may at their discretion entrust it with other duties in connection with the administration of such grants.

V.

REGULATIONS MADE BY THE ADMIRALTY UNDER
THE PROVISIONS OF THE NAVY (PLEDGING OF
CERTIFICATES, &c.) ACT, 1914 (4 & 5 GEO. 5, c. 89).

FOR PRESCRIBING ADAPTATIONS IN SECTION 156 OF THE ARMY
ACT AS APPLIED TO PERSONS SERVING IN THE NAVAL FORCES
OF THE CROWN, AND FOR EXTENDING THE APPLICATION OF
SUB-SECTION 9 OF THE SAID SECTION, SO AS TO MAKE IT
APPLICABLE TO ANY CERTIFICATE RELATING TO THE SERVICE
OF ANY PERSON SERVING IN SUCH FORCES.

THE Admiralty, in pursuance of the Navy (Pledging of Certificates, &c.) Act, 1914, hereby make the following regulations:

In its application to persons serving in the Naval Forces of the Crown (which expression includes the Royal Marine Forces) and to Certificates relating to the service of persons so serving, Section 156 of the Army Act shall have effect as adapted and set forth hereunder, and the application of sub-section 9 shall be extended as hereunder appears:

(1) Every person who—

- (a) Buys, exchanges, takes in pawn, detains, or receives from a person serving in the Naval Forces of the Crown, or any person acting on his behalf, on any pretence whatsoever; or
- (b) Solicits or entices any person serving in the Naval Forces of the Crown to sell, exchange, pawn, or give away; or
- (c) Assists or acts for a person serving in the Naval Forces of the Crown in selling, exchanging, pawning, or making away with

any of the property following, namely, any arms, ammunition, equipments, instruments, Naval necessities, or clothing, or any Naval decorations of a person serving in the Naval Forces of the Crown, or any furniture, bedding, blankets, sheets, utensils, and stores in Naval charge, or any provisions or forage issued for the use of a person serving in the Naval Forces of the Crown, or his horse, or of any horse employed in His Majesty's service, shall, unless he proves either that he acted in ignorance of the

same being such property as aforesaid, or of the person with whom he dealt being or acting for a person serving in the Naval Forces of the Crown, or that the same was sold by order of the Admiralty, or some competent Naval authority, be liable on summary conviction, in the case of the first offence, to a fine not exceeding Twenty pounds together with treble the value of any property of which such offender has become possessed by means of his offence; and in the case of a second offence to a fine not less than Five pounds, and not exceeding Twenty pounds, together with treble the value of any property of which such offender has become possessed by means of his offence, or to imprisonment, with or without hard labour, for a term not exceeding six months.

(2) Where any such property as above in this section mentioned is found in the possession or keeping of any person, such person may be taken or summoned before a Court of Summary Jurisdiction, and if such Court have reasonable ground to believe that the property so found, was stolen, or was bought, exchanged, taken in pawn, obtained, or received in contravention of this section, then if such person does not satisfy the Court that he came by the property so found lawfully and without any contravention of this Act, he shall be liable on summary conviction to a penalty not exceeding Five pounds.

(3) A person charged with an offence against this section and the wife or husband of such person, may, if he or she think fit, be sworn and examined as an ordinary witness in the case.

(4) A person found committing an offence against this section may be apprehended without warrant, and taken, together with the property which is the subject of the offence, before a Court of Summary Jurisdiction; and any person to whom such property as above-mentioned is offered to be sold, pawned, or delivered, who has reasonable cause to suppose that the same is offered in contravention of this section, may, and if he has the power shall, apprehend the person offering such property, and forthwith take him, together with such property, before a Court of Summary Jurisdiction.

(5) A Court of Summary Jurisdiction, if satisfied on oath that there is reasonable cause to suspect that any person has in his possession, or on his premises, any property on or with respect to which any offence in this section mentioned has been committed, may grant a warrant to search for such property, as in the case of stolen goods; and any property found on such search shall be seized by the officer charged with the execution of such warrant, who shall bring the person in whose possession the same is found before some Court of Summary Jurisdiction, to be dealt with according to law.

(6) For the purposes of this section, property shall be deemed

to be in the possession or keeping of a person if he knowingly has it in the actual possession or keeping of any other person, or in any house, building, lodging, apartment, field, or place, open or inclosed, whether occupied by himself or not, and whether the same is so had for his own use or benefit, or for the use or benefit of another.

(7) Articles which are public stores within the meaning of the Public Stores Act, 1875, and are not included in the foregoing description shall not be deemed to be stores issued within the meaning of Section 13 of that Act.

(8) It shall be lawful for the Governor-General of India or for the legislature of any Colony, on the recommendation of the Governor thereof, but not otherwise, by any law or ordinance to reduce a minimum fine under this section to such amount as may to such Governor-General or legislature appear to be better adapted to the pecuniary means of the inhabitants.

(9) Every person who receives, detains, or has in his possession the identity certificate or life certificate or allotment certificate of a person entitled to a naval or marine pension or to reserve pay or to any bounty or any other certificate relating to the service of any person serving in the Naval Forces of the Crown as a pledge or security for a debt, or with a view to obtain payment from the pensioner or person entitled to the pay or bounty of a debt due either to himself or to any other person, shall be liable on summary conviction to the like penalty as for an offence under sub-section 1 of this section, and the certificate shall be deemed to be property within the meaning of this section.

VI.

ORDER IN COUNCIL ALTERING THE CLASSIFICATION OF NAVAL OFFICERS BY INCLUDING THE ENGINEER BRANCH IN THE MILITARY BRANCH.

At the Court at Buckingham Palace, the 7th day of January, 1915.

PRESENT,

The King's Most Excellent Majesty in Council.

WHEREAS there was this day read at the Board a Memorial from the Right Honourable the Lords Commissioners of the Admiralty, dated the 2nd day of January, 1915, in the words following, viz. :

"Whereas by Section 3 of the Naval and Marine Pay and Pensions Act, 1865, it is enacted, *inter alia*, that all pay, pensions, or other allowances in the nature thereof, payable in respect of services in Your Majesty's Naval or Marine Force to a person being or having been an Officer, Seaman, or Marine therein, shall be paid in such manner, and subject to such restrictions, conditions, and provisions, as are from time to time directed by Order in Council :

"And whereas in Article 168 of the Regulations for the government of Your Majesty's Naval Service it is laid down that the Officers of Your Majesty's Navy are to be divided into six Branches, viz. :—Military, Engineer, Medical, Accountant, Naval Instructor, and Artisan :

"And whereas we are of opinion that it is desirable in the interests of Your Majesty's Naval Service that the Officers of the Engineer Branch should now be classified as part of the Military Branch, and, further, that certain alterations should be made in the rates of pay of Engineer Commanders and Engineer Lieutenant-Commanders of Your Majesty's Fleet :

"We beg leave humbly to recommend that Your Majesty may be graciously pleased, by Your Order in Council, to approve of the Regulations set forth in the annexed Schedule, to take effect from the 1st day of January, 1915.

"The Lords Commissioners of Your Majesty's Treasury have signified their concurrence in these proposals in so far as the pay of the Officers is concerned.

"Schedule.

"1. From the 1st day of January, 1915, Officers of His Majesty's Navy will be divided into five Branches, namely Military, Medical, Accountant, Naval Instructor, and Artisan.

"2. Officers of the existing Engineer Branch, although forming part of the Military Branch, will retain their present titles.

"They will not be eligible to take command of His Majesty's Ships.

"In all details relating to the duties of the Fleet and to the discipline and interior economy of His Majesty's Ships they will be subject to the authority of any Officer who may be in charge of the Executive duties of the Ship, or acting as Officer of the Watch, or specially detailed for the charge of any other special service or duty, of whatever seniority such Officer may be.

"3. The following revised rates of pay to take effect for Engineer Commanders and Engineer Lieutenant-Commanders as specified :

Pay per diem.
£ s. d.

"Engineer Commander and Engineer Lieutenant-Commander after 4 years from date of promotion to Engineer Lieutenant-Commander	1 0 0
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"Engineer Commander and Engineer Lieutenant-Commander after 6 years from date of promotion to Engineer Lieutenant-Commander	1 2 0 "
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His Majesty, having taken the said Memorial into consideration, was pleased, by and with the advice of His Privy Council, to approve of what is therein proposed. And the Right Honourable the Lords Commissioners of the Admiralty are to give the necessary directions herein accordingly.

ALMERIC FITZROY.

VII.

ORDER IN COUNCIL SANCTIONING PROPOSALS REGARDING THE COUNTING OF TIME FOR INCREASE OF PAY, ETC., FOR PENSION OF MEN IN THE ROYAL NAVAL AIR SERVICE.

At the Court at Buckingham Palace, the 7th day of January, 1915.

PRESENT,

The King's Most Excellent Majesty in Council.

WHEREAS there was this day read at the Board a Memorial from the Right Honourable the Lords Commissioners of the Admiralty, dated the 21st day of December, 1914, in the words following, viz.:

"Whereas by Section 3 of the Naval and Marine Pay and Pensions Act, 1865, it is enacted, *inter alia*, that all pay, pensions, and other allowances in the nature thereof, payable in respect of services in Your Majesty's Naval or Marine Force to a person being or having been an Officer, Seaman, or Marine therein, shall be paid in such manner, and subject to such restrictions, conditions, and provisions, as are from time to time directed by Order in Council:

"And whereas Your Majesty, by Your Order in Council bearing date the 16th day of July, 1914, was pleased to sanction the revision in certain respects of the provisional arrangements for the emoluments of Officers and others serving in the Naval Wing of the Royal Flying Corps sanctioned by Your Order in Council bearing date the 19th day of July, 1912:

"And whereas we are of opinion that these arrangements require additions in certain further respects:

"We beg leave humbly to recommend that Your Majesty may be graciously pleased to sanction the following proposals regarding the counting of time for increase of pay, etc., for pension of men entered in the Royal Naval Air Service:

"(1) The active service of all ratings in the Royal Naval Air Service whether they are lent from the Active List

of the Royal Navy or entered direct under special engagement for a period of service in the Royal Naval Air Service to be followed by service in the Royal Fleet Reserve (Air Service Section), to count as continuous service for all purposes :

- “(2) Men lent from the Active List of the Royal Navy to the Royal Naval Air Service to count their active service in the Royal Naval Air Service for pension and gratuity either in their Naval rating or their Air Service grade, whichever is the more advantageous to them :
- “(3) The time served in the Royal Naval Air Service by men lent from the Active List to count, on reverting to the general service, towards increase of pay in the general service rating held during the period :
- “(4) Men transferred from the Military Wing, Royal Flying Corps, to the Royal Naval Air Service in no case to receive pensions less than those which equivalent ranks in the Military Wing, Royal Flying Corps, are allowed.

“The Lords Commissioners of Your Majesty's Treasury have signified their concurrence in these proposals.”

His Majesty, having taken the said Memorial into consideration, was pleased, by and with the advice of His Privy Council, to approve of what is therein proposed. And the Right Honourable the Lords Commissioners of the Admiralty are to give the necessary directions herein accordingly.

ALMERIC FITZROY.

VIII.

ORDER IN COUNCIL UNDER SECTION 3 OF THE NAVAL
AND MARINE PAY AND PENSIONS ACT, 1865 (28 &
29 VICT. C. 73), APPROVING PAYMENT OF RETIRED
PAY AND A BONUS TO OFFICERS ON RESERVED
AND RETIRED LISTS CALLED INTO ACTIVE
SERVICE.

At the Court at Buckingham Palace, the 3rd day of February,
1915.

PRESENT,

The King's Most Excellent Majesty in Council.

WHEREAS there was this day read at the Board a Memorial from the Right Honourable the Lords Commissioners of the Admiralty, dated the 29th day of January, 1915, in the words following, viz. :

"Whereas by Section 3 of the Naval and Marine Pay and Pensions Act, 1865, it is enacted, *inter alia*, that all pay, pensions, or other allowances in the nature thereof, payable in respect of services in Your Majesty's Naval or Marine Force to a person being or having been an Officer, Seaman, or Marine therein, shall be paid in such manner, and subject to such restrictions, conditions, and provisions, as are from time to time directed by Order in Council :

"And whereas by Orders in Council dated the 8th March, 1895, and the 5th March, 1910, provision is made for the payment to Officers called into active service from the Reserved or Retired Lists in time of war or emergency of the pay and emoluments of their corresponding Ranks on the Active List, together with a bonus of twenty-five per cent. for every pound of the full pay earned by them, exclusive of allowances :

"And whereas this arrangement is found to be inequitable in cases where an Officer's retired-pay exceeds the full-pay of his corresponding Rank on the Active List :

"We beg leave humbly to recommend that Your Majesty may be graciously pleased, by Your Order in Council, to authorise

the continued payment of retired-pay to Officers on the Reserved or Retired Lists called into active service in time of war or emergency, including the present hostilities, in cases where such retired-pay exceeds the full-pay of their corresponding Ranks on the Active List, together with a bonus of twenty-five per cent. for every pound of retired-pay received by them during the period of re-employment, exclusive of allowances.

"The Lords Commissioners of Your Majesty's Treasury have signified their concurrence in this proposal."

His Majesty, having taken the said Memorial into consideration, was pleased, by and with the advice of His Privy Council, to approve of what is therein proposed. And the Right Honourable the Lords Commissioners of the Admiralty are to give the necessary directions herein accordingly.

ALMERIC FITZROY.

IX.

ORDER IN COUNCIL UNDER SECTION 3 OF THE NAVAL
AND MARINE PAY AND PENSIONS ACT, 1865 (28 &
29 VICT. C. 73), SANCTIONING REVISED RATES OF
PAY FOR CERTAIN RANKS OF OFFICERS OF THE
ROYAL NAVY AND ROYAL MARINES.

At the Court at Buckingham Palace, the 3rd day of February,
1915.

PRESENT,

The King's Most Excellent Majesty in Council.

WHEREAS there was this day read at the Board a Memorial from the Right Honourable the Lords Commissioners of the Admiralty, dated the 29th day of January, 1915, in the words following, viz. :

"Whereas by Section 3 of the Naval and Marine Pay and Pensions Act, 1865, it is enacted, *inter alia*, that all pay, pensions, or other allowances in the nature thereof, payable in respect of services in Your Majesty's Naval or Marine Force to a person being or having been an Officer, Seaman, or Marine therein, shall be paid in such manner, and subject to such restrictions, conditions, and provisions, as are from time to time directed by Order in Council :

"And whereas we consider it desirable that improvements should be made in the scales of pay, and in the conditions governing half-pay, applicable to certain ranks of Officers of Your Majesty's Navy and Royal Marines :

"We beg leave humbly to recommend that Your Majesty may be graciously pleased, by Your Order in Council, to sanction the proposals set forth in the annexed Schedule, with effect as from the 1st January, 1915.

"The Lords Commissioners of Your Majesty's Treasury have signified their concurrence in these proposals.

"Officers, Royal Navy."

“ NOTE.—The above rates of pay to apply to Lieutenants and Sub-Lieutenants, R.N.R. and R.N.V.R., and to Assistant Paymasters, R.N.V.R., except Assistant Paymasters, R.N.V.R., serving in the Royal Naval Division who receive 10s. a day under Order in Council of 17th December, 1914.

	Present.	Proposed.
	A day.	A day.
	<i>s. d.</i>	<i>s. d.</i>
" Lieutenant, R.M.A. or R.M.L.I., after 3 years, R.M.A. .	7 5	8 6
R.M.L.I.	7 0	8 6
" " " after 6 years, both .	9 0	10 0

	Present.	Proposed.
	A day.	A day.
	s. d.	s. d.
" Captain, R.M.A. or R.M.L.I., under 1 year, R.M.A. .	12 1	12 6
R.M.L.I. .	11 7	12 6
" " " after 1 year, R.M.A. .	12 7	12 6
R.M.L.I. .	12 1	12 6

"Captains now in receipt of the rate of 12s. 7d. a day to retain it.

" Royal Marine Officers entered after 1st January, 1912.

	Present.	Proposed.
	A day. s. d.	A day. s. d.
" Probationary 2nd Lieutenants, after 2 years	6 0	7 6
" Lieutenants, R.M., on promotion	10 0	11 0
" Captains, R.M., on promotion	12 0	12 6

" Quartermasters, R.M.

	Present.		Proposed.	
	R.M.A.	R.M.L.I.	R.M.A.	R.M.L.I.
	A day. s. d.	A day. s. d.	A day. s. d.	A day. s. d.
" Quartermasters, R.M., on appointment	9 6	9 0	10 6	10 0
after 5 years	11 0	10 6	12 0	11 6
" 10 "	12 6	12 0	13 6	13 0
" 15 "	14 0	13 6	15 0	14 6
" 20 "	15 6	15 0	16 6	16 0

" Half-Pay.

" Half-pay for less than a month to be abolished for all Officers below the rank or relative rank of Captain, Royal Navy, except in case of prolonged sickness, for misconduct, or at an Officer's own request. This concession to apply also, under similar conditions, to Officers on the Retired, Reserved and Emergency Lists when re-employed."

His Majesty, having taken the said Memorial into consideration, was pleased, by and with the advice of His Privy Council to approve of what is therein proposed. And the Right Honourable the Lords Commissioners of the Admiralty are to give the necessary directions herein accordingly.

ALMERIC FITZROY.

X.

STATEMENT OF THE MEASURES ADOPTED TO INTER- CEPT THE SEA-BORNE COMMERCE OF GERMANY.

1. THE object of this memorandum is to give an account of the manner in which the sea power of the British Empire has been used during the present war for the purpose of intercepting Germany's imports and exports.

I.—BELLIGERENT RIGHTS AT SEA.

2. The means by which a belligerent who possesses a fleet has, up to the time of the present war, interfered with the commerce of his enemy are three in number :

- (i) The capture of contraband of war on neutral ships.
- (ii) The capture of enemy property at sea.
- (iii) A blockade by which all access to the coast of the enemy is cut off.

3. The second of these powers has been cut down since the Napoleonic wars by the Declaration of Paris of 1856, under which enemy goods on a neutral ship, with the exception of contraband of war, were exempted from capture. Enemy goods which had been loaded on British or Allied ships before the present war were seized in large quantities immediately after its outbreak ; but for obvious reasons such shipments ceased, for all practical purposes, after August 4th, 1914, and this particular method of injuring the enemy may therefore, for the moment, be disregarded.

No blockade of Germany was declared until March 1915, and therefore up to that date we had to rely exclusively on the right to capture contraband.

II.—CONTRABAND.

4. By the established classification goods are divided into three classes :—

- (a) Goods primarily used for warlike purposes.
- (b) Goods which may be equally used for either warlike or peaceful purposes.
- (c) Goods which are exclusively used for peaceful purposes.

5. Under the law of contraband, goods in the first class may be seized if they can be proved to be going to the enemy country ; goods in the second class may be seized if they can be proved to be going to the enemy Government or its armed forces ; goods in the third class must be allowed to pass free. As to the articles which fall within any particular one of these classes, there has been no general agreement in the past, and the attempts of belligerents to enlarge the first class at the expense of the second, and the second at the expense of the third, have led to considerable friction with neutrals.

6. Under the rules of prize law, as laid down and administered by Lord Stowell, goods were not regarded as destined for an enemy country unless they were to be discharged in a port in that country ; but the American prize courts in the Civil War found themselves compelled by the then existing conditions of commerce to apply and develop the doctrine of continuous voyage, under which goods which could be proved to be ultimately intended for an enemy country were not exempted from seizure on the ground that they were first to be discharged in an intervening neutral port. This doctrine, although hotly contested by many publicists, had never been challenged by the British Government, and was more or less recognised as having become part of International Law.

7. When the present war broke out it was thought convenient, in order, among other things, to secure uniformity of procedure among all the Allied forces, to declare the principles of international law which the Allied Governments regarded as applicable to contraband and other matters. Accordingly, by the Orders in Council of August 20th and October 22nd, 1914, and the corresponding French Decrees, the rules set forth in the Declaration of London were adopted by the French and British Governments with certain modifications. As to contraband, the lists of contraband and free goods in the Declaration were rejected, and the doctrine of continuous voyage was applied not only to absolute contraband, as the Declaration already provided, but also to conditional contraband, if such goods were consigned to order, or if the papers did not show the consignee of the goods, or if they showed a consignee in enemy territory.

8. The situation as regards German trade was as follows : Direct trade to German ports (save across the Baltic) had almost entirely ceased, and practically no ships were met with bound to German ports. The supplies that Germany desired to import from overseas were directed to neutral ports in Scandinavia, Holland, or (at first) Italy, and every effort was made to disguise their real destination. The power which we had to deal with this situation in the circumstances then existing was :

(i) We had the right to seize articles of absolute contraband

if it could be proved that they were destined for the enemy country, although they were to be discharged in a neutral port.

- (ii) We had the right to seize articles of conditional contraband if it could be proved that they were destined for the enemy Government or its armed forces, in the cases specified above, although they were to be discharged in a neutral port.

9. On the other hand, there was no power to seize articles of conditional contraband if they could not be shown to be destined for the enemy Government or its armed forces, or non-contraband articles, even if they were on their way to a port in Germany, and there was no power to stop German exports.

10. That was the situation until the actions of the German Government led to the adoption of more extended powers of intercepting German commerce in March 1915. The Allied Governments then decided to stop all goods which could be proved to be going to, or coming from, Germany. The state of things produced is in effect a blockade, adapted to the condition of modern war and commerce, the only difference in operation being that the goods seized are not necessarily confiscated. In these circumstances it will be convenient, in considering the treatment of German imports and exports, to omit any further reference to the nature of the commodities in question as, once their destination or origin is established, the power to stop them is complete. Our contraband rights, however, remain unaffected, though they, too, depend on the ability to prove enemy destination.

III.—GERMAN EXPORTS.

11. In carrying out our blockade policy great importance was from the outset attached to the stoppage of the enemy's export trade, because it is clear that to the extent that his exports can be stopped, and his power to establish credits for himself in neutral countries curtailed, his imports from such neutral countries will more or less automatically diminish. The identification of articles of enemy origin is, thanks to the system of certificates of origin which has been established, a comparatively simple matter, and the degree to which the policy of stopping German and Austrian oversea exports has been successful can best be judged by looking at the statistics of German and Austrian imports into America.

12. The normal imports into the United States of America from Germany and Austria, before the war, for the seven months March to September inclusive, are valued approximately and in round figures at 124,000,000 dollars (£24,800,000). From March to September inclusive, this year's imports into the

United States of America from those countries were valued at approximately 22,000,000 dollars (£4,400,000). This sum includes the goods which were already in neutral ports in the way of shipment or in transit when the further measures adopted by the Allied Governments were announced in March, and also a considerable proportion of those which have been allowed to pass in the circumstances mentioned in paragraph 14. A certain amount is also to be accounted for by goods received from Germany and Austria by parcel post, which it was not originally possible to stop effectively. Steps have now been taken to close this channel to enemy exports. The latest returns available, those for September, show that over 92 per cent. of the German exports to the United States of America have been stopped.

13. The above figures allow of but one conclusion: the oversea exports of Germany and Austria are very near extinction. It is of special interest to note that in the main these exports have not been merely diverted to the neutral countries adjacent to Germany. The imports which those countries have received from Germany have not in fact exceeded the normal quantities of previous years.

14. The object of the policy being to injure the enemy, the Allied Governments have in certain cases permitted the export of goods which had been ordered before the March 1st, and had been either paid for prior to that date or ordered before that date on terms which rendered the neutral purchaser liable to pay whether the goods reached him or not. It is clear that in these cases no harm would be done to the enemy, or pressure put upon him, by not allowing the goods to pass. On the contrary, he would, if that were done, both receive his price and retain the goods and their possible use. The total value of the goods with which the Allied Governments have undertaken not to interfere in such cases up to the end of 1915 is approximately £3,000,000. If the goods allowed to pass under this arrangement were deducted from the total enemy exports to the United States of America, it would be seen that the amount of German exports which serve to increase the resources of the enemy is almost negligible.

IV.—GERMAN IMPORTS.

15. As regards German imports, however, the problem is much more complicated. Its central difficulty is that of distinguishing between goods with an enemy destination from those with a genuine neutral destination. A belligerent who makes use of his naval power to intercept the commerce of his enemy has to justify his action in each particular case before a Prize Court which is bound by international law and not by the

ordinary law of the country in which it sits. It is not sufficient for him to stop a neutral vessel and remove from her such articles as he may believe to be intended for his enemy; it is necessary subsequently to demonstrate in a court of law that the destination of the goods was such as to justify the belligerent in seizing them. If this is not proved, the goods will be released, and damages may be awarded against the captor. It must also be remembered that, in order to justify the seizure of a particular consignment, it is necessary to satisfy the Prize Court of the enemy destination of that consignment, and evidence of a general nature, if unaccompanied by proofs directly bearing on a particular case, is not enough. All this applies as much to goods seized as contraband as it does to those seized for breach of blockade.

16. In earlier wars the production of the necessary proof was a comparatively simple matter. Owing to the difficulties of inland transport before the introduction of railways, goods for the enemy country were usually carried to ports in that country and the ship's papers showed their destination. When, therefore, the ship had been captured, the papers found on board were generally sufficient to dispose of the case. In the old cases of contraband, the question at issue was usually not where the goods were in fact going to, but whether their nature was such as to make them liable to condemnation in view of the destination shown on the ship's papers. Even in the American Civil War the difficulty of proving destination was usually not serious, because the neutral harbours through which the supply of goods for the Confederate States was carried on were in normal time ports of comparatively small importance, and it could be shown that in normal times there was no local market for goods of such quantities and character.

17. The case has been far different in the present war. The goods which Germany attempts to import are consigned to neutral ports, and it need hardly be said that the papers on board convey no suggestion as to their ultimate destination. The conditions of modern commerce offer almost infinite opportunities of concealing the real nature of a transaction, and every device which the ingenuity of the persons concerned, or their lawyers, could suggest has been employed to give to shipments intended for Germany the appearance of genuine transactions with a neutral country. The ports to which the goods are consigned, such as Rotterdam and Copenhagen, have in peace time an important trade, which increases the difficulty of distinguishing the articles ultimately intended to reach the enemy country from those which represent importation into the neutral country concerned for its own requirements. If action had to be taken solely on such information as might be gathered by the boarding officer on his

visit to the ship, it would have been quite impossible to interfere to an appreciable extent with German imports, and the Allied Governments would therefore have been deprived of a recognised belligerent right.

18. In these circumstances, unless the Allied Governments were prepared to seize and place in the Prize Court the whole of the cargo of every ship which was on her way to a neutral country adjacent to Germany, and to face the consequences of such action, the only course open to them was to discover some test by which goods destined for the enemy could be distinguished from those which were intended for neutral consumption.

19. The first plan adopted for this purpose is to make use of every source of information available in order to discover the real destination of sea-borne goods, and to exercise to the full the right of stopping such goods as the information obtained showed to be suspect, while making a genuine and honest attempt to distinguish between *bona fide* neutral trade and trade which, although in appearance equally innocent, was in fact carried on with the enemy country.

20. For this purpose a considerable organisation has been established in the Contraband Committee, which sits at the Foreign Office, and works in close touch with the Admiralty, Board of Trade, and War Trade Department. Nearly every ship on her way to Scandinavian or Dutch ports comes or is sent into a British port for examination, and every item of her cargo is immediately considered in the light of all the information which has been collected from the various sources open to the Government, and which, after nearly a year and a half of war, is very considerable. Any items of cargo as to which it appears that there is a reasonable ground for suspecting an enemy destination are placed in the Prize Court, while articles as to the destination of which there appears to be doubt are detained pending further investigation.

21. If, however, this were all that could be done, there is little doubt that it would be impossible to effect a complete cutting off of the enemy's supplies. For instance, there are many cases in which it would be difficult to establish in the Prize Court our right to stop goods, although they or their products, perhaps after passing through several hands, would in all probability ultimately reach the enemy. To indicate more plainly the nature of these difficulties would obviously be to assist the enemy and the neutral traders who desire to supply him; but the difficulties exist, and, in order to meet them, it has been necessary to adopt other means by which neutral may be more easily distinguished from enemy trade, and the blockade of Germany made more effective than it would be if we relied solely on the right to stop goods which could be proved to be intended for the enemy.

V.—GUARANTEES BY IMPORTERS.

22. Importers in neutral countries adjacent to Germany have found that the exercise of our belligerent rights to some extent impedes the importation of articles which they genuinely need for the requirements of their own country, and consequently they have in many cases shown willingness to make agreements with this country which on the one hand secure their receiving the supplies which they need, while on the other guaranteeing to us that goods allowed to pass under the terms of the agreement will not reach the enemy. The neutral Governments themselves have as a rule considered it inadvisable to make agreements on such points with His Majesty's Government; they have on the whole confined their action to prohibiting the export of certain articles which it was necessary for them to import from abroad. Inasmuch, however, as in most cases they reserved the right to grant exemptions from such prohibitions, and as trade between the Scandinavian countries themselves was usually excluded from the scope of such measures, the mere fact of the existence of such prohibitions could not be considered a sufficient safeguard that commodities entering the country would not ultimately reach Germany.

23. In some neutral countries, however, agreements have been made by representative associations of merchants, the basis of which is that the associations guarantee that articles consigned to or guaranteed by them, and their products, will not reach the enemy in any form, while His Majesty's Government undertake not to interfere with shipments consigned to the association, subject to their right to institute prize proceedings in exceptional cases where there is evidence that an attempt has been made to perpetrate a fraud upon the association, and to pass the goods ultimately through to Germany. The first of these agreements was made with the Netherlands Oversea Trust, and similar agreements, either general or dealing with particular commodities of special importance, such as rubber and cotton, have been made with bodies of merchants in Sweden, Norway, Denmark, and Switzerland. The details of these agreements it is impossible to give more fully, but the general principle is that the associations, before allowing goods to be consigned to them, require the would-be receivers to satisfy them, by undertakings backed by sufficient pecuniary penalties, that the goods will not leave the country, either in their original shape or after any process of manufacture, and notwithstanding any sales of which they may be the subject.

In some cases these agreements provide that the associations shall themselves be bound to detain or return goods believed by His Majesty's Government to be destined for the enemy; so that

it does not follow that cargoes allowed to proceed to a neutral port will necessarily be delivered to the consignees.

24. The existence of such agreements is of great value in connection with the right of seizure, because the fact of articles not being consigned to or guaranteed by the association, or being consigned to it without the necessary consent, at once raises the presumption that they are destined for the enemy.

VI.—AGREEMENTS WITH SHIPPING LINES.

25. Delays caused by the elaborate exercise of the belligerent right of visit and search are very irksome to shipping ; and many shipping lines which carry on regular services with Scandinavia and Holland have found it well worth their while to make agreements with His Majesty's Government under which they engage to meet our requirements with regard to goods carried by them, in return for an undertaking that their ships will be delayed for as short a time as possible for examination in British ports. Several agreements of this kind have been made ; the general principle of them is that His Majesty's Government obtain the right to require any goods carried by the line, if not discharged in the British port of examination, to be either returned to this country for Prize Court proceedings, or stored in the country of destination until the end of the war, or only handed to the consignees under stringent guarantees that they or their products will not reach the enemy. The companies obtain the necessary power to comply with these conditions by means of a special clause inserted in all their bills of lading, and the course selected by the British authorities is determined by the nature of the goods and the circumstances of the case. In addition to this, some of these companies make a practice, before accepting consignments of certain goods, of inquiring whether their carriage is likely to lead to difficulties, and of refusing to carry them in cases where it is intimated that such would be the case. The control which His Majesty's Government are in a position to exercise under these agreements over goods carried on the lines in question is of very great value.

VII.—BUNKER COAL.

26. Much use has been made recently of the power which the British Government are in a position to exercise owing to their ability to refuse bunker coal to neutral ships in ports in the British Empire. Bunker coal is now only supplied to neutral vessels whose owners are willing to comply with certain conditions which ensure that no vessels owned, chartered, or controlled by them trade with any port in an enemy country, or carry any cargo which proceeds from, or is destined for, an enemy

country. The number of owners who accept these conditions increases almost daily. The use of this weapon has already induced several shipping lines which before the war maintained regular services between Scandinavian and German Baltic ports to abandon their services.

VIII.—AGREEMENTS IN RESPECT OF PARTICULAR COMMODITIES.

27. Special agreements have been made in respect of particular articles the supply of which is mainly derived from the British Empire or over which the British Government are in a position to exercise control. The articles covered by such agreements, the object of which is to secure such control over the supply of these materials as will ensure that they or their products will not reach the enemy, are rubber, copper, wool, hides, oil, tin, plum-bago, and certain other metals.

IX.—RATIONING.

28. Though the safeguards already described do much to stop entirely all trades to and from Germany, yet, in spite of all of them, goods may and do reach our enemies, and, on the other hand, considerable inconvenience is caused to genuinely neutral trade. It is to avoid both evils that His Majesty's Government have for months past advocated what is called rationing, as by far the soundest system both for neutrals and belligerents. It is an arrangement by which the import of any given article into a neutral country is limited to the amount of its true domestic requirements. The best way of carrying this arrangement into effect is probably by agreement with some body representing either one particular trade or the whole commerce of the country. Without such an agreement there is always a risk that, in spite of all precautions, the whole rationed amount of imports may be secured by traders who are really German agents. These imports might go straight on to Germany, and there would then be great practical difficulty in dealing with the next imports destined, it may be, for genuine neutral traders. If they were to be stopped, there would be great complaint of injustice to neutrals, and yet unless that be done the system would break down. Accordingly, agreements of this kind have been concluded in various countries, and His Majesty's Government are not without hope that they may be considerably extended in the future. Even so the security is not perfect. An importer may always let his own countrymen go short and re-export to Germany. The temptation to do so is great, and as our blockade forces prices up is increasing. But the amount that gets through in this way cannot be large, and

the system is in its working so simple that it minimises the delays and other inconveniences to neutral commerce inseparable from war. Of the details of these arrangements it is impossible to speak. But their principle appears to offer the most hopeful solution of the complicated problems arising from the necessity of exercising our blockade through neutral countries.

X.—RESULTS.

29. As to the results of the policy described in this memorandum, the full facts are not available. But some things are clear. It has already been shown that the export trade of Germany has been substantially destroyed. With regard to imports, it is believed that some of the most important, such as cotton, wool, and rubber, have for many months been excluded from Germany. Others, like fats and oils and dairy produce, can only be obtained there, if at all, at famine prices. All accounts, public and private, which reach His Majesty's Government agree in stating that there is considerable discontent amongst sections of the German population, and there appear to have been food riots in some of the larger towns. That our blockade prevents any commodities from reaching Germany is not, and under the geographical circumstances cannot be true. But it is already successful to a degree which good judges both here and in Germany thought absolutely impossible, and its efficiency is growing day by day. It is right to add that these results have been obtained without any serious friction with any neutral Government. There are obvious objections to dwelling on the importance to us of the goodwill of neutral nations; but any one who considers the geographical, military, and commercial situation of the various countries will certainly not underrate the value of this consideration. There is great danger when dealing with international questions in concentrating attention exclusively on one point in them, even if that point be as vital as is undoubtedly the blockade of Germany.

XI.—CONCLUSION.

30. To sum up, the policy which has been adopted in order to enforce the blockade of Germany may be described as follows:

- (i) German exports to oversea countries have been almost entirely stopped. Such exceptions as have been made are in cases where a refusal to allow the export of the goods would hurt the neutral concerned without inflicting any injury upon Germany.
- (ii) All shipments to neutral countries adjacent to Germany are carefully scrutinised with a view to the detection of

a concealed enemy destination. Wherever there is reasonable ground for suspecting such destination, the goods are placed in the Prize Court. Doubtful consignments are detained until satisfactory guarantees are produced.

- (iii) Under agreements in force with bodies of representative merchants in several neutral countries adjacent to Germany, stringent guarantees are exacted from importers, and so far as possible all trade between the neutral country and Germany, whether arising overseas or in the neutral country itself, is restricted.
- (iv) By agreements with shipping lines and by a vigorous use of the power to refuse bunker coal, a large proportion of the neutral mercantile marine which carries on trade with Scandinavia and Holland has been induced to agree to conditions designed to prevent goods carried in these ships from reaching the enemy.
- (v) Every effort is being made to introduce a system of rationing which will ensure that the neutral countries concerned only import such quantities of the articles specified as are normally imported for their own consumption.

XI.

NAVAL DESPATCHES.

ENGAGEMENT OFF HELIGOLAND,

On Friday, August 28th, 1914.

PUBLISHED IN THE SUPPLEMENT TO THE "LONDON GAZETTE,"
No. 28948, OF OCTOBER 23RD, 1914.

ADMIRALTY,
October 21st, 1914.

THE following despatches have been received from Vice-Admiral (Acting) Sir David Beatty, K.C.B., M.V.O., D.S.O., H.M.S. *Lion*, Rear-Admiral Arthur H. Christian, M.V.O., H.M.S. *Euryalus*, Commodore Reginald Y. Tyrwhitt, Commodore (T), H.M.S. *Arethusa*, and Commodore Roger J. B. Keyes, C.B., M.V.O., Commodore (S), reporting the engagement off Heligoland on Friday, August 28th.

A memorandum by the Director of the Air Department, Admiralty, is annexed.

H.M.S. "LION,"
September 1st, 1914.

SIR,—I have the honour to report that on Thursday, August 27th, at 5 a.m., I proceeded with the First Battle Cruiser Squadron and First Light Cruiser Squadron in company, to rendezvous with the Rear-Admiral, *Invincible*.

At 4 a.m., August 28th, the movements of the Flotillas commenced as previously arranged, the Battle Cruiser Squadron and Light Cruiser Squadron supporting. The Rear-Admiral, *Invincible*, with *New Zealand* and four Destroyers, having joined my flag, the Squadron passed through the prearranged rendezvous.

At 8.10 a.m. I received a signal from the Commodore (T), informing me that the Flotilla was in action with the enemy. This was presumably in the vicinity of their prearranged rendezvous. From this time until 11 a.m. I remained about the vicinity

ready to support as necessary, intercepting various signals, which contained no information on which I could act.

At 11 a.m. the Squadron was attacked by three Submarines. The attack was frustrated by rapid manœuvring and the four Destroyers were ordered to attack them. Shortly after 11 a.m., various signals having been received indicating that the Commodore (T) and Commodore (S) were both in need of assistance, I ordered the Light Cruiser Squadron to support the Torpedo Flotillas.

Later I received a signal from the Commodore (T), stating that he was being attacked by a large Cruiser, and a further signal informing me that he was being hard pressed and asking for assistance. The Captain (D), First Flotilla, also signalled that he was in need of help.

From the foregoing the situation appeared to me critical. The Flotillas had advanced only ten miles since 8 a.m., and were only about twenty-five miles from two enemy bases on their flank and rear respectively. Commodore Goodenough had detached two of his Light Cruisers to assist some Destroyers earlier in the day, and these had not yet rejoined. (They rejoined at 2.30 p.m.) As the reports indicated the presence of many enemy ships—one a large Cruiser—I considered that his force might not be strong enough to deal with the situation sufficiently rapidly, so at 11.30 a.m. the Battle Cruisers turned to E.S.E., and worked up to full speed. It was evident that to be of any value the support must be overwhelming and carried out at the highest speed possible.

I had not lost sight of the risk of Submarines, and possible sortie in force from the enemy's base, especially in view of the mist to the south-east.

Our high speed, however, made submarine attack difficult, and the smoothness of the sea made their detection comparatively easy. I considered that we were powerful enough to deal with any sortie except by a Battle Squadron, which was unlikely to come out in time, provided our stroke was sufficiently rapid.

At 12.15 p.m. *Fearless* and First Flotilla were sighted retiring west. At the same time the Light Cruiser Squadron was observed to be engaging an enemy ship ahead. They appeared to have her beat.

I then steered N.E. to sounds of firing ahead, and at 12.30 p.m. sighted *Arethusa* and Third Flotilla retiring to the westward engaging a Cruiser of the *Kolberg* class on our port bow. I steered to cut her off from Heligoland, and at 12.37 p.m. opened fire. At 12.42 the enemy turned to N.E., and we chased at 27 knots.

At 12.56 p.m., sighted and engaged a two-funnelled Cruiser ahead. *Lion* fired two salvos at her, which took effect, and she disappeared into the mist, burning furiously and in a sinking

condition. In view of the mist and that she was steering at high speed at right angle to *Lion*, who was herself steaming at 28 knots, the *Lion's* firing was very creditable.

Our Destroyers had reported the presence of floating mines to the eastward and I considered it inadvisable to pursue her. It was also essential that the Squadrons should remain concentrated, and I accordingly ordered a withdrawal. The Battle Cruisers turned north and circled to port to complete the destruction of the vessel first engaged. She was sighted again at 1.25 p.m. steaming S.E. with colours still flying. *Lion* opened fire with two turrets, and at 1.35 p.m., after receiving two salvoes, she sank.

The four attached Destroyers were sent to pick up survivors, but I deeply regret that they subsequently reported that they searched the area but found none.

At 1.40 p.m. the Battle Cruisers turned to the northward, and *Queen Mary* was again attacked by a Submarine. The attack was avoided by the use of the helm. *Lowestoft* was also unsuccessfully attacked. The Battle Cruisers covered the retirement until nightfall. By 6 p.m., the retirement having been well executed and all Destroyers accounted for, I altered course, spread the Light Cruisers, and swept northwards in accordance with the Commander-in-Chief's orders. At 7.45 p.m. I detached *Liverpool* to Rosyth with German prisoners, seven officers and seventy-nine men, survivors from *Mainz*. No further incident occurred.—I have the honour to be, Sir, your obedient Servant.

(Signed) DAVID BEATTY,
Vice-Admiral.

The Secretary of the Admiralty.

"EURYALUS,"
September 28th, 1914.

SIR,—I have the honour to report that in accordance with your orders a reconnaissance in force was carried out in the Heligoland Bight on August 28th, with the object of attacking the enemy's Light Cruisers and Destroyers.

The forces under my orders (viz., the Cruiser Force, under Rear-Admiral H. H. Campbell, C.V.O., *Euryalus*, *Amethyst*, First and Third Destroyer Flotillas and the Submarines) took up the positions assigned to them on the evening of August 27th, and, in accordance with directions given, proceeded during the night to approach the Heligoland Bight.

The Cruiser Force under Rear-Admiral Campbell, with *Euryalus* (my Flagship) and *Amethyst*, was stationed to intercept any enemy vessel chased to the westward. At 4.30 p.m. on August 28th these Cruisers, having proceeded to the eastward, fell in with *Lurcher* and three other Destroyers, and the wounded

and prisoners in these vessels were transferred in boats to *Bacchante* and *Cressy*, which left for the Nore. *Amethyst* took *Laurel* in tow, and at 9.30 p.m. *Hogue* was detached to take *Arethusa* in tow. This latter is referred to in Commodore R. Y. Tyrwhitt's report, and I quite concur in his remarks as to the skill and rapidity with which this was done in the dark with no lights permissible.

Commodore Reginald Y. Tyrwhitt was in command of the Destroyer Flotillas, and his report is enclosed herewith. His attack was delivered with great skill and gallantry, and he was most ably seconded by Captain William F. Blunt, in *Fearless*, and the Officers in command of the Destroyers, who handled their vessels in a manner worthy of the best traditions of the British Navy.

Commodore Roger J. B. Keyes, in *Lurcher*, had on August 27th escorted some Submarines into positions allotted to them in the immediate vicinity of the enemy's coast. On the morning of August 28th, in company with *Firedrake*, he searched the area to the southward of the Battle Cruisers for the enemy's Submarines, and subsequently, having been detached, was present at the sinking of the German Cruiser *Mainz*, when he gallantly proceeded alongside her and rescued 220 of her crew, many of whom were wounded. Subsequently he escorted *Laurel* and *Liberty* out of action, and kept them company till Rear-Admiral Campbell's Cruisers were sighted.

As regards the Submarine Officers, I would specially mention the names of:

- (a) Lieutenant-Commander Ernest W. Leir. His coolness and resource in rescuing the crews of the *Goshawk's* and *Defender's* boats at a critical time of the action were admirable.
- (b) Lieutenant-Commander Cecil P. Talbot. In my opinion, the bravery and resource of the Officers in command of Submarines since the war commenced are worthy of the highest commendation.

I have the honour to be,

Sir,

Your obedient Servant,

A. H. CHRISTIAN,

Rear-Admiral.

The Secretary, Admiralty.

H.M.S. "LOWESTOFT,"

September 26th, 1914.

SIR,—I have the honour to report that at 5 a.m. on Thursday, August 27th, in accordance with orders received from Their Lordships, I sailed in *Arethusa*, in company with the First and Third

Flotillas, except *Hornet*, *Tigress*, *Hydra*, and *Loyal*, to carry out the prearranged operations. H.M.S. *Fearless* joined the Flotillas at sea that afternoon.

At 6.53 a.m. on Friday, August 28th, an enemy's Destroyer was sighted, and was chased by the 4th Division of the Third Flotilla.

From 7.20 to 7.57 a.m. *Arethusa* and the Third Flotilla were engaged with numerous Destroyers and Torpedo-Boats which were making for Heligoland; course was altered to port to cut them off.

Two Cruisers, with 4 and 2 funnels respectively, were sighted on the port bow at 7.57 a.m., the nearest of which was engaged. *Arethusa* received a heavy fire from both Cruisers and several Destroyers until 8.15 a.m., when the four-funnelled Cruiser transferred her fire to *Fearless*.

Close action was continued with the two-funnelled Cruiser on converging courses until 8.25 a.m., when a 6-inch projectile from *Arethusa* wrecked the fore bridge of the enemy, who at once turned away in the direction of Heligoland, which was sighted slightly on the starboard bow at about the same time.

All ships were at once ordered to turn to the westward, and shortly afterwards speed was reduced to 20 knots.

During this action *Arethusa* had been hit many times, and was considerably damaged; only one 6-inch gun remained in action, all other guns and torpedo-tubes having been temporarily disabled.

Lieutenant Eric W. P. Westmacott (Signal Officer) was killed at my side during this action. I cannot refrain from adding that he carried out his duties calmly and collectedly, and was of the greatest assistance to me.

A fire occurred opposite No. 2 gun port side caused by a shell exploding some ammunition, resulting in a terrific blaze for a short period and leaving the deck burning. This was very promptly dealt with and extinguished by Chief Petty Officer Frederick W. Wrench, O.N. 158630.

The Flotillas were re-formed in Divisions and proceeded at 20 knots. It was now noticed that *Arethusa's* speed had been reduced.

Fearless reported that the 3rd and 5th Divisions of the First Flotilla had sunk the German Commander's Destroyer and that two boats' crews belonging to *Defender* had been left behind, as our Destroyers had been fired upon by a German Cruiser during their act of mercy in saving the survivors of the German Destroyer.

At 10 a.m., hearing that Commodore (S) in *Lurcher* and *Fire-drake* were being chased by Light Cruisers, I proceeded to his assistance with *Fearless* and the First Flotilla until 10.37 a.m., when, having received no news and being in the vicinity of

Heligoland, I ordered the ships in company to turn to the westward.

All guns except two 4-inch were again in working order, and the upper-deck supply of ammunition was replenished.

At 10.55 a.m. a four-funnelled German Cruiser was sighted, and opened a very heavy fire at about 11 o'clock.

Our position being somewhat critical, I ordered *Fearless* to attack, and the First Flotilla to attack with torpedoes, which they proceeded to do with great spirit. The Cruiser at once turned away, disappeared in the haze, and evaded the attack.

About ten minutes later the same Cruiser appeared on our starboard quarter. Opened fire on her with both 6-inch guns; *Fearless* also engaged her, and one Division of Destroyers attacked her with torpedoes without success.

The state of affairs and our position was then reported to the Admiral Commanding Battle Cruiser Squadron.

We received a very severe and almost accurate fire from this Cruiser; salvo after salvo was falling between 10 and 30 yards short, but not a single shell struck; two torpedoes were also fired at us, being well directed, but short.

The Cruiser was badly damaged by *Arethusa's* 6-inch guns and a splendidly directed fire from *Fearless*, and she shortly afterwards turned away in the direction of Heligoland.

Proceeded, and four minutes later sighted the three-funnelled Cruiser *Mainz*. She endured a heavy fire from *Arethusa* and *Fearless* and many Destroyers. After an action of approximately twenty-five minutes she was seen to be sinking by the head, her engines stopped, besides being on fire.

At this moment the Light Cruiser Squadron appeared, and they very speedily reduced the *Mainz* to a condition which must have been indescribable.

I then recalled *Fearless* and the Destroyers, and ordered cease fire.

We then exchanged broadsides with a large, four-funnelled Cruiser on the starboard quarter at long range, without visible effect.

The Battle Cruiser Squadron now arrived, and I pointed out this Cruiser to the Admiral Commanding, and was shortly afterwards informed by him that the Cruiser in question had been sunk and another set on fire.

The weather during the day was fine, sea calm, but visibility poor, not more than three miles at any time when the various actions were taking place, and was such that ranging and spotting were rendered difficult.

I then proceeded with fourteen Destroyers of the Third Flotilla and nine of the First Flotilla.

Arethusa speed was about 6 knots until 7 p.m., when it was im-

possible to proceed any further, and fires were drawn in all boilers except two, and assistance called for.

At 9.30 p.m. Captain Wilmot S. Nicholson, of the *Hogue*, took my ship in tow in a most seamanlike manner, and, observing that the night was pitch-dark and the only lights showing were two small hand lanterns, I consider his action was one which deserves special notice from Their Lordships.

I would also specially recommend Lieutenant-Commander Arthur P. N. Thorowgood, of *Arethusa*, for the able manner he prepared the ship for being towed in the dark.

H.M. Ship under my command was then towed to the Nore, arriving at 5 p.m. on August 29th. Steam was then available for slow speed, and the ship was able to proceed to Chatham under her own steam.

I beg again to call attention to the services rendered by Captain W. F. Blunt, of H.M.S. *Fearless*, and the Commanding Officers of the Destroyers of the First and Third Flotillas, whose gallant attacks on the German Cruisers at critical moments undoubtedly saved *Arethusa* from more severe punishment and possible capture.

I cannot adequately express my satisfaction and pride at the spirit and ardour of my Officers and Ship's Company, who carried out their orders with the greatest alacrity under the most trying conditions, especially in view of the fact that the ship, newly built, had not been forty-eight hours out of the Dockyard before she was in action.

It is difficult to specially pick out individuals, but the following came under my special observation :

H.M.S. *Arethusa*.

Lieutenant-Commander Arthur P. N. Thorowgood, First Lieutenant, and in charge of the After Control.

Lieutenant-Commander Ernest K. Arbuthnot (G), in charge of the Fore Control.

Sub-Lieutenant Clive A. Robinson, who worked the range-finder throughout the entire action with extraordinary coolness.

Assistant Paymaster Kenneth E. Badcock, my Secretary, who attended me on the bridge throughout the entire action.

Mr. James D. Godfrey, Gunner (T), who was in charge of the torpedo-tubes.

The following men were specially noted :

Armourer Arthur F. Hayes, O.N. 342026 (Ch.).

Second Sick Berth Steward George Trolley, O.N. M. 296 (Ch.).

Chief Yeoman of Signals Albert Fox, O.N. 194656 (Po.), on fore bridge during entire action.

Chief Petty Officer Frederick W. Wrench, O.N. 158630 (Ch.)
(for ready resource in extinguishing fire caused by explosion
of cordite).

Private Thomas Millington, R.M.L.I., No. Ch. 17417.

Private William J. Beirne, R.M.L.I., No. Ch. 13540.

First Writer Albert W. Stone, O.N. 346080 (Po.).

I also beg to record the services rendered by the following
Officers and Men of H.M. Ships under my orders :

H.M.S. *Fearless*.

Mr. Robert M. Taylor, Gunner, for coolness in action under
heavy fire.

The following Officers also displayed great resource and energy
in effecting repairs to *Fearless* after her return to harbour, and
they were ably seconded by the whole of their staffs :

Engineer Lieutenant-Commander Charles de F. Messervy.
Mr. William Morrissey, Carpenter.

H.M.S. *Goshawk*.

Commander the Hon Herbert Meade, who took his Division
into action with great coolness and nerve, and was instrumental
in sinking the German Destroyer *V. 187*, and, with the boats
of his Division, saved the survivors in a most chivalrous
manner.

H.M.S. *Ferret*.

Commander Geoffrey Mackworth, who, with his Division, most
gallantly seconded Commander Meade, of *Goshawk*.

H.M.S. *Laertes*.

Lieutenant-Commander Malcolm L. Goldsmith, whose ship
was seriously damaged, taken in tow, and towed out of action
by *Fearless*.

Engineer Lieutenant-Commander Alexander Hill, for repairing
steering gear and engines under fire.

Sub-Lieutenant George H. Faulkner, who continued to fight
his gun after being wounded.

Mr. Charles Powell, Acting Boatswain, O.N. 209388, who was
gunlayer of the centre gun, which made many hits. He
behaved very coolly, and set a good example when getting in
tow and clearing away the wreckage after the action.

Edward Naylor, Petty Officer, Torpedo Gunner's Mate, O.N.
189136, who fired a torpedo which the Commanding Officer of

Laeries reports undoubtedly hit the *Mainz*, and so helped materially to put her out of action.

Stephen Pritchard, Stoker Petty Officer, O.N. 285152, who very gallantly dived into the cabin flat immediately after a shell had exploded there, and worked a fire hose.

Frederick Pierce, Stoker Petty Officer, O.N. 307943, who was on watch in the engine room and behaved with conspicuous coolness and resource when a shell exploded in No. 2 boiler.

H.M.S. *Laurel*.

Commander Frank F. Rose, who most ably commanded his vessel throughout the early part of the action, and after having been wounded in both legs, remained on the bridge until 6 p.m., displaying great devotion to duty.

Lieutenant Charles R. Peploe, First Lieutenant, who took command after Commander Rose was wounded, and continued the action till its close, bringing his Destroyer out in an able and gallant manner under most trying conditions.

Engineer Lieutenant-Commander Edward H. T. Meeson, who behaved with great coolness during the action, and steamed the ship out of action, although she had been very severely damaged by explosion of her own lyddite, by which the after funnel was nearly demolished. He subsequently assisted to carry out repairs to the vessel.

Sam Palmer, Leading Seaman (G.L. 2) O.N. 179529, who continued to fight his guns until the end of the action, although severely wounded in the leg.

Albert Edmund Sellens, Able Seaman (L.T.O.), O.N. 217245, who was stationed at the fore torpedo-tubes; he remained at his post throughout the entire action, although wounded in the arm, and then rendered first aid in a very able manner before being attended to himself.

George H. Sturdy, Chief Stoker, O.N. 285547, and

Alfred Britton, Stoker Petty Officer, O.N. 289893, who both showed great coolness in putting out a fire near the centre gun after an explosion had occurred there; several lyddite shells were lying in the immediate vicinity.

William R. Boiston, Engine Room Artificer, 3rd class, O.N. M. 1369, who showed great ability and coolness in taking charge of the after boiler room during the action, when an explosion blew in the after funnel and a shell carried away pipes and seriously damaged the main steam pipe.

William H. Gorst, Stoker Petty Officer, O.N. 305616.

Edward Crane, Stoker Petty Officer, O.N. 307275.

Harry Wilfred Hawkes, Stoker 1st class, O.N. K. 12086.

John W. Bateman, Stoker 1st class, O.N. K. 12100.

These men were stationed in the after boiler room and conducted themselves with great coolness during the action, when an explosion blew in the after funnel, and shell carried away pipes and seriously damaged the main steam pipe.

H.M.S. *Liberty*.

The late Lieutenant-Commander Nigel K. W. Barttelot commanded the *Liberty* with great skill and gallantry throughout the action. He was a most promising and able Officer, and I consider his death is a great loss to the Navy.

Engineer Lieutenant-Commander Frank A. Butler, who showed much resource in effecting repairs during the action.

Lieutenant Henry E. Horan, First Lieutenant, who took command after the death of Lieutenant-Commander Barttelot, and brought his ship out of action in an extremely able and gallant manner under most trying conditions.

Mr. Harry Morgan, Gunner (T), who carried out his duties with exceptional coolness under fire.

Chief Petty Officer James Samuel Beadle, O.N. 171735, who remained at his post at the wheel for over an hour after being wounded in the kidneys.

John Galvin, Stoker Petty Officer, O.N. 279946, who took entire charge, under the Engineer Officer, of the party who stopped leaks, and accomplished his task although working up to his chest in water.

H.M.S. *Laforey*.

Mr. Ernest Roper, Chief Gunner, who carried out his duties with exceptional coolness under fire.

I have the honour to be,

Sir,

Your obedient Servant

R. Y. TYRWHITT,
Commodore (T).

H.M.S. "MAIDSTONE,"
October 17th, 1914.

SIR,—In compliance with Their Lordship's directions, I have the honour to report as follows upon the Services performed by Submarines since the commencement of hostilities:

Three hours after the outbreak of war, Submarines *E-6* (Lieutenant-Commander Cecil P. Talbot), and *E-8* (Lieutenant-Commander Francis H. H. Goodhart), proceeded unaccompanied to carry out a reconnaissance in the Heligoland Bight. These two vessels returned with useful information, and had the

privilege of being the pioneers on a service which is attended by some risk.

During the transportation of the Expeditionary Force the *Lurcher* and *Firedrake* and all the Submarines of the Eighth Submarine Flotilla occupied positions from which they could have attacked the High Sea Fleet had it emerged to dispute the passage of our transports. This patrol was maintained day and night without relief, until the personnel of our Army had been transported and all chance of effective interference had disappeared.

These Submarines have since been incessantly employed on the enemy's coast in the Heligoland Bight and elsewhere, and have obtained much valuable information regarding the composition and movement of his patrols. They have occupied his waters and reconnoitred his anchorages, and, while so engaged, have been subjected to skilful and well-executed anti-submarine tactics; hunted for hours at a time by torpedo-craft and attacked by gunfire and torpedoes.

At midnight on August 26th, I embarked in the *Lurcher*, and, in company with *Firedrake* and Submarines *D-2*, *D-8*, *E-4*, *E-5*, *E-6*, *E-7*, *E-8*, and *E-9* of the Eighth Submarine Flotilla, proceeded to take part in the operations in the Heligoland Bight arranged for August 28th. The Destroyers scouted for the Submarines until nightfall on the 27th, when the latter proceeded independently to take up various positions from which they could co-operate with the Destroyer Flotillas on the following morning.

At daylight on August 28th the *Lurcher* and *Firedrake* searched the area through which the Battle Cruisers were to advance for hostile Submarines, and then proceeded towards Heligoland in the wake of Submarines *E-6*, *E-7*, and *E-8*, which were exposing themselves with the object of inducing the enemy to chase them to the westward.

On approaching Heligoland, the visibility, which had been very good to seaward, reduced to 5,000 to 6,000 yards, and this added considerably to the anxieties and responsibilities of the Commanding Officers of Submarines, who handled their vessels with coolness and judgment in an area which was necessarily occupied by friends as well as foes.

Low visibility and calm sea are the most unfavourable conditions under which Submarines can operate, and no opportunity occurred of closing with the Enemy's Cruisers to within torpedo range.

Lieutenant-Commander Ernest W. Leir, Commanding Submarine *E-4*, witnessed the sinking of the German Torpedo Boat Destroyer *V-187* through his periscope, and, observing a Cruiser of the *Stettin* class close, and open fire on the British Destroyers which had lowered their boats to pick up the survivors, he proceeded to attack the Cruiser, but she altered course before he

could get within range. After covering the retirement of our Destroyers, which had had to abandon their boats, he returned to the latter, and embarked a Lieutenant and nine men of *Defender*, who had been left behind. The boats also contained two Officers and eight men of *V-187*, who were unwounded, and eighteen men who were badly wounded. As he could not embark the latter, Lieutenant-Commander Leir left one of the Officers and six unwounded men to navigate the British boats to Heligoland. Before leaving he saw that they were provided with water, biscuit, and a compass. One German Officer and two men were made prisoners of war.

Lieutenant-Commander Leir's action in remaining on the surface in the vicinity of the enemy and in a visibility which would have placed his vessel within easy gun-range of an enemy appearing out of the mist, was altogether admirable.

This enterprising and gallant Officer took part in the reconnaissance which supplied the information on which these operations were based, and I beg to submit his name, and that of Lieutenant-Commander Talbot, the Commanding Officer of *E-6*, who exercised patience, judgment, and skill in a dangerous position, for the favourable consideration of Their Lordships.

On September 13th, *E-9* (Lieutenant-Commander Max K. Horton) torpedoed and sank the German Light Cruiser *Hela* six miles south of Heligoland.

A number of Destroyers were evidently called to the scene after *E-9* had delivered her attack, and these hunted her for several hours.

On September 14th, in accordance with his orders, Lieutenant-Commander Horton examined the outer anchorage of Heligoland, a service attended by considerable risk.

On September 25th, Submarine *E-6* (Lieutenant-Commander C. P. Talbot), while diving, fouled the moorings of a mine laid by the enemy. On rising to the surface she weighed the mine and sinker; the former was securely fixed between the hydroplane and its guard; fortunately, however, the horns of the mine were pointed outboard. The weight of the sinker made it a difficult and dangerous matter to lift the mine clear without exploding it. After half an hour's patient work this was effected by Lieutenant Frederick A. P. Williams-Freeman and Able Seaman Ernest Randall Cremer, Official Number 214235, and the released mine descended to its original depth.

On October 6th, *E-9* (Lieutenant-Commander Max K. Horton), when patrolling off the Ems, torpedoed and sank the enemy's destroyer, *S-126*.

The enemy's torpedo-craft pursue tactics which, in connection with their shallow draft, made them exceedingly difficult to attack with torpedo, and Lieutenant-Commander Horton's

success was the result of much patient and skilful zeal. He is a most enterprising submarine officer, and I beg to submit his name for favourable consideration.

Lieutenant Charles M. S. Chapman, the Second in Command of *E-9*, is also deserving of credit.

Against an enemy whose capital vessels have never, and Light Cruisers have seldom, emerged from their fortified harbours, opportunities of delivering Submarine attacks have necessarily been few, and on one occasion only, prior to September 13th, has one of our Submarines been within torpedo range of a Cruiser during daylight hours.

During the exceptionally heavy westerly gales which prevailed between September 14th and 21st, the position of the Submarines on a lee shore, within a few miles of the enemy's coast, was an unpleasant one.

The short, steep seas which accompany westerly gales in the Heligoland Bight made it difficult to keep the conning tower hatches open. There was no rest to be obtained, and even when cruising at a depth of 60 feet, the Submarines were rolling considerably, and pumping—*i.e.* vertically moving about twenty feet.

I submit that it was creditable to the Commanding Officers that they should have maintained their stations under such conditions.

Service in the Heligoland Bight is keenly sought after by the Commanding Officers of the Eighth Submarine Flotilla, and they have all shown daring and enterprise in the execution of their duties. These Officers have unanimously expressed to me their admiration of the cool and gallant behaviour of the Officers and men under their command. They are, however, of the opinion that it is impossible to single out individuals when all have performed their duties so admirably, and in this I concur.

The following Submarines have been in contact with the enemy during these operations:

- D-1* (Lieutenant-Commander Archibald D. Cochrane).
- D-2* (Lieutenant-Commander Arthur G. Jameson).
- D-3* (Lieutenant-Commander Edward C. Boyle).
- D-5* (Lieutenant-Commander Godfrey Herbert).
- E-4* (Lieutenant-Commander Ernest W. Leir).
- E-5* (Lieutenant-Commander Charles S. Benning).
- E-6* (Lieutenant-Commander Cecil P. Talbot).
- E-7* (Lieutenant-Commander Ferdinand E. B. Feilmann).
- E-9* (Lieutenant-Commander Max K. Horton).

I have the honour to be,

Sir,

Your obedient Servant,

(Signed) ROGER KEYES,
Commodore (S).

MEMORANDUM BY CAPTAIN MURRAY F. SUETER, C.B., R.N.,
DIRECTOR OF THE AIR DEPARTMENT, ADMIRALTY.

Commander Charles R. Samson, R.N., was in command of the Aeroplane and Armoured Motor Support of the Royal Naval Air Service (Naval Wing) at Dunkerque, between the dates September 1st to October 5th.

During this period several notable air reconnaissances were made, and skirmishes took place. Of these particular mention may be made of the aeroplane attack on September 4th on four enemy cars and forty men, on which occasion several bombs were dropped; and of the successful skirmishes at Cassel on September 4th, Savy on September 12th, Aniche on September 22nd, Orchies on September 23rd.

On September 22nd, Flight Lieutenant C. H. Collet, of the Royal Naval Air Service (Naval Wing of the Royal Flying Corps), flying a Sopwith tractor biplane, made a long flight and a successful attack on the German Zeppelin airship shed at Düsseldorf.

Lieutenant Collet's feat is notable—gliding down from 6,000 feet, the last 1,500 feet in mist, he finally came in sight of the airship shed at a height of 400 feet, only a quarter of a mile away from it.

Flight Lieutenant Marix, acting under the orders of Squadron Commander Spenser Grey, carried out a successful attack on the Düsseldorf airship shed during the afternoon of October 8th. From a height of 600 feet he dropped two bombs on the shed, and flames 500 feet high were seen within thirty seconds. The roof of the shed was also observed to collapse.

Lieutenant Marix's machine was under heavy fire from rifles and mitrailleuse and was five times hit whilst making the attack.

Squadron Commander Spenser Grey, whilst in charge of a flight of naval aeroplanes at Antwerp, penetrated during a 3½ hours' flight into the enemy's country as far as Cologne on October 8th. He circled the city under fire at 60 feet and discharged his bombs on the military railway station. Considerable damage was done.

October 11th, 1914.

CENTRAL CHANCERY OF THE ORDERS OF KNIGHTHOOD.

LORD CHAMBERLAIN'S OFFICE,
ST. JAMES'S PALACE,

October 21st, 1914.

The King has been graciously pleased to give orders for the following appointment to the Most Honourable Order of the

OFFICIAL DOCUMENTS

Bath, in recognition of the services of the undermentioned Officer mentioned in the foregoing despatches :

To be an Ordinary Member of the Military Division of the Third Class or Companion.

Captain Reginald Yorke Tyrwhitt (Commodore, Second Class),
Royal Navy.

ADMIRALTY,
October 21st, 1914.

The King has been graciously pleased to give orders for the following appointments to the Distinguished Service Order, and for the award of the Distinguished Service Cross (late Conspicuous Service Cross), in respect of the undermentioned Officers in recognition of their services mentioned in the foregoing despatches :

To be Companions of the Distinguished Service Order.

Captain William Frederick Blunt.
Commander the Hon. Herbert Meade.
Commander Frank Forester Rose.
Commander Charles Rumney Samson.
Lieutenant-Commander Max Kennedy Horton.
Lieutenant Frederick Arthur Peere Williams-Freeman.
Squadron-Commander Spenser Douglas Adair Grey.
Flight-Lieutenant Reginald Lennox George Marix.
Lieutenant Charles Herbert Collet, Royal Marine Artillery.

To receive the Distinguished Service Cross (late Conspicuous Service Cross).

Lieutenant Henry Edward Horan.
Lieutenant Charles Manners Sutton Chapman.
Lieutenant Charles Reid Peploe.
Chief Gunner Ernest Roper.
Gunner Robert Mitchell Taylor.
Gunner James Douglas Godfrey.
Gunner Harry Morgan.
(Acting) Boatswain Charles Powell.

The following promotions in His Majesty's Fleet have been made in recognition of the services mentioned :

To be promoted to Commander.

Lieutenant-Commander Malcolm Lennon Goldsmith.
Lieutenant-Commander Ernest William Leir.
Lieutenant-Commander Cecil Ponsonby Talbot.

To be promoted to Lieutenant.

Sub-Lieutenant Clive Askew Robinson.

Sub-Lieutenant George Haines Faulkner.

The following Officer has been noted for early promotion :

Lieutenant-Commander Max Kennedy Horton.

The following awards have also been made :

To receive the Conspicuous Gallantry Medal.

Ernest Randall Cremer, Able Seaman, O.N. 214,235.

To receive the Distinguished Service Medal.

Ernest Edward Stevens, Chief Engine Room Artificer (1st class),
O.N. 269,451.

Arthur Cecil Smith, Acting Chief Engine Room Artificer (2nd
class), O.N. 270,627.

Albert Fox, Chief Yeoman of Signals, O.N. 194,656.

Frederick William Walter Wrench, Chief Petty Officer, O.N.
158,630.

George Henry Sturdy, Chief Stoker, O.N. 285,547.

Edward Charles Taylor, Chief Stoker, O.N. 283,225.

James William Armstrong, Engine Room Artificer, 1st class,
O.N. 270,451.

William Rochester Boiston, Engine Room Artificer, 3rd class,
O.N. M. 1369.

James Samuel Beadle, Acting Chief Petty Officer, O.N. 171,733.

Edward Naylor, Petty Officer, O.N. 189,136.

Arthur Hiscock, Petty Officer, O.N. 191,423.

Alfred George Antram, Petty Officer, O.N. 223,207.

Harry Weate, Petty Officer, O.N. 174,893.

Stephen Pritchard, Stoker Petty Officer, O.N. 285,152.

Frederick Pierce, Stoker Petty Officer, O.N. 307,943.

Alfred Britton, Stoker Petty Officer, O.N. 289,893.

John Galvin, Stoker Petty Officer, O.N. 279,946.

Arthur Fred Hayes, Armourer, O.N. 342,026.

Frederick Charles Langridge, Stoker, 1st class, O.N. K. 6765.

Sam Palmer, Leading Seaman, O.N. 179,529.

William Arthur McGill, Leading Seaman, O.N. 217,484.

Albert Edmund Sellens, Able Seaman, O.N. 217,245.

Henry Hurlock, Able Seaman, O.N. 238,126.

ADMIRALTY,

October 21st, 1914.

DESPATCH RELATING TO OPERATIONS ROUND
ANTWERP.ADMIRALTY,
December 5th, 1914.

THE following despatch has been received from Field-Marshal Sir J. D. P. French, G.C.B., G.C.V.O., K.C.M.G., covering a despatch from Major-General A. Paris, C.B., R.M.A., relating to the operations round Antwerp from October 3rd to the 9th.

*From Sir J. D. P. French, Field-Marshal, Commander-in-Chief,
to the Secretary of the Admiralty.*

In forwarding this report to the Army Council at the request of the Lords Commissioners of the Admiralty, I have to state that, from a comprehensive review of all the circumstances, the force of Marines and Naval Brigades which assisted in the defence of Antwerp was handled by General Paris with great skill and boldness.

Although the results did not include the actual saving of the fortress, the action of the force under General Paris certainly delayed the enemy for a considerable time, and assisted the Belgian Army to be withdrawn in a condition to enable it to reorganise and refit, and regain its value as a fighting force. The destruction of war material and ammunition—which, but for the intervention of this force, would have proved of great value to the enemy—was thus able to be carried out.

The assistance which the Belgian Army has rendered throughout the subsequent course of the operations on the canal and the Yser river has been a valuable asset to the Allied cause, and such help must be regarded as an outcome of the intervention of General Paris's force. I am further of opinion that the moral effect produced on the minds of the Belgian Army by this necessarily desperate attempt to bring them succour, before it was too late, has been of great value to their use and efficiency as a fighting force.

J. D. P. FRENCH,
Field-Marshal, Commanding-in-Chief.

*From the Secretary of the Admiralty to Field-Marshal Sir J. D. P.
French, Commanding-in-Chief. (Enclosure in No. 1.)*

ADMIRALTY,
November 2nd, 1914.

SIR,

I am commanded by My Lords Commissioners of the Admiralty to transmit herewith a despatch from Major-General

Paris, reporting the proceedings of the Division round Antwerp from October 3rd to 9th, with a view to its being considered by you and forwarded to the Army Council with your survey of the operations as a whole.

I am, etc., .

W. GRAHAM GREENE.

From Major-General A. Paris, C.B., Commanding Royal Naval Division, to the Secretary of the Admiralty. (Sub-enclosure in No. 1.)

October 31st, 1914.

Regarding the operations round Antwerp from October 3rd to 9th, I have the honour to report as follows :

The Brigade (2,200 all ranks) reached Antwerp during the night of October 3rd to 4th, and early on the 4th occupied, with the 7th Belgian Regiment, the trenches facing Lierre, with advanced post on the River Nethe, relieving some exhausted Belgian troops.

The outer forts on this front had already fallen and bombardment of the trenches was in progress. This increased in violence during the night and early morning of October 5th, when the advanced posts were driven in and the enemy effected a crossing of the river, which was not under fire from the trenches.

About midday the 7th Belgian Regiment was forced to retire, thus exposing my right flank. A vigorous counter-attack, gallantly led by Colonel Tierchon, 2nd Chasseurs, assisted by our aeroplanes, restored the position late in the afternoon.

Unfortunately, an attempt made by the Belgian troops during the night (October 5th to 6th) to drive the enemy across the river failed, and resulted in the evacuation of practically the whole of the Belgian trenches.

The few troops now capable of another counter-attack were unable to make any impression, and the position of the Marine Brigade became untenable.

The bombardment, too, was very violent, but the retirement of the Brigade was well carried out, and soon after midday (October 6th) an intermediate position, which had been hastily prepared, was occupied.

The two Naval Brigades reached Antwerp during the night, October 5th to 6th. The 1st Brigade moved out in the afternoon of 5th to assist the withdrawal to the main 2nd Line of Defence.

The retirement was carried out during the night, October 6th to 7th, without opposition, and the Naval Division occupied the intervals between the forts on the 2nd Line of Defence.

The bombardment of the town, forts, and trenches began at

midnight, October 7th to 8th, and continued with increasing intensity until the evacuation of the fortress.

As the water supply had been cut, no attempt could be made to subdue the flames, and soon 100 houses were burning. Fortunately, there was no wind, or the whole town and bridges must have been destroyed.

During the day (October 8th) it appeared evident that the Belgian Army could not hold the forts any longer. About 5.30 p.m. I considered that if the Naval Division was to avoid disaster an immediate retirement under cover of darkness was necessary. General De Guise, the Belgian Commander, was in complete agreement. He was most chivalrous and gallant, insisting on giving orders that the roads and bridges were to be cleared for the passage of the British troops.

The retirement began about 7.30 p.m., and was carried out under very difficult conditions.

The enemy were reported in force (a Division plus a Reserve Brigade) on our immediate line of retreat, rendering necessary a detour of fifteen miles to the north.

All the roads were crowded with Belgian troops, refugees, herds of cattle, and all kinds of vehicles, making intercommunication a practical impossibility. Partly for these reasons, partly on account of fatigue, and partly from at present unexplained causes, large numbers of the 1st Naval Brigade became detached, and I regret to say are either prisoners or interned in Holland.

Marching all night (October 8th to 9th), one battalion of 1st Brigade, the 2nd Brigade and Royal Marine Brigade, less one battalion, entrained at St. Gillies Waes and effected their retreat without further incident.

The Battalion (Royal Marine Brigade) Rear Guard of the whole force, also entrained late in the afternoon together with many hundreds of refugees, but at Morbeke the line was cut, the engine derailed, and the enemy opened fire.

There was considerable confusion. It was dark and the agitation of the refugees made it difficult to pass any orders. However, the battalion behaved admirably, and succeeded in fighting its way through, but with a loss in missing of more than half its number. They then marched another ten miles to Selzaat and entrained there.

Colonel Seely and Colonel Bridges were not part of my command, but they rendered most skilful and helpful services during the evacuation.

The casualties are approximately—

1st Naval Brigade and 2nd Naval Brigade, 5 killed, 64 wounded, 2,040 missing.

Royal Marine Brigade, 23 killed, 103 wounded, 388 missing.

In conclusion, I would call your attention to the good services rendered by the following officers and men during the operations :

OFFICERS.

Staff—

Lieut.-Colonel A. H. Ollivant, R.A.
Major Richardson, N.Z. Staff Corps.
Fleet Surgeon E. J. Finch, R.N.

1st Brigade—

Lieutenant G. G. Grant, R.N.V.R.
Sub-Lieutenant C. O. F. Modin, R.N.V.R.

2nd Brigade—

Commodore O. Backhouse, R.N., Commanding Brigade.
Captain W. L. Maxwell, Brigade Major.
Sub-Lieutenant H. C. Hedderwick, R.N.V.R.

Royal Marine Brigade—

Lieut.-Colonel C. McN. Parsons, R.M.L.I., in command most of the time.
Major A. H. French, R.M.L.I., 10th Battalion.
Lieutenant D. J. Gowney, R.M.L.I., 10th Battalion.

MEN.

Naval Brigade—

Chief Petty Officer B. H. Ellis, No. 748, B Co., R.N.V.R., London.
Chief Petty Officer Payne, D Co.
Petty Officer (Acting) W. Wallace, O.N., Dev., 211, 130.
Stoker Petty Officer W. S. Cole, O.N., Ch. 100, 113.
Leading Seaman (Acting) H. D. Lowe, R.N.R., Dev., No. B. 2542.
Ordinary Seaman G. Ripley, new Army recruit, C Co. (now R.N.V.R.).
Ordinary Seaman T. Machen, new Army recruit, C Co. (now R.N.V.R.).

Royal Marine Brigade—

Sergeant-Major (Acting) Galliford.
Quartermaster-Sergeant Kenny, R.F.R., Ch. A. 426.
Sergeant G. H. Bruce, R.F.R., Ch. A. 631.
Lance-Corporal T. C. Frank, Ch. 17817.
Lance-Corporal W. J. Cook, Ply. 7685.
Private G. H. Hall, R.F.R., Ch. B. 194.
Private C. J. Fleet, R.F.R., Ch. B. 1585.

Private S. Lang, Ch. 18446.

Sergeant E. Walch (R. Naval Auxiliary Sick Berth Reserve),
S.B. 508.

I have the honour to be,

Sir,

Your obedient Servant,

A. PARIS,

Major-General, General Officer Commanding-in-Chief.

The officers and men named below were mentioned in the Despatch which appears above and which relates to operations round Antwerp.

EXTRACT FROM SUPPLEMENT TO THE "LONDON GAZETTE" OF
1ST JANUARY, 1915, No. 29024.

The King has been graciously pleased to give orders for the following appointments to the Distinguished Service Order and for the Award of the Distinguished Service Cross in respect of the undermentioned officers :

To be Companion of the Distinguished Service Order.

Major Arthur Harwood French, Royal Marine Light Infantry,
Royal Marine Brigade, Royal Naval Division.

To receive the Distinguished Service Cross.

Lieut. Gerald Gordon Grant, Royal Naval Volunteer Reserve,
Royal Naval Division.

Sub-Lieut. Charles Oscar Frittriof Modin, Royal Naval Volunteer
Reserve, Royal Naval Division.

Lieut. David James Gowney, Royal Marine Light Infantry,
Royal Marine Brigade, Royal Naval Division.

The following Awards have also been made :

To receive the Distinguished Service Medal.

For the operations round Antwerp from October 3rd to 9th :

NAVAL BRIGADE.

Chief Petty Officer Bernard Henry Ellis, No. 748, B. Co., R.N.V.R.,
London.

Chief Petty Officer Payne, D Co.

Petty Officer William Wallace, O.N., Dev. 211130.

Stoker Petty Officer William Stephen Cole, O.N., Ch. 100113.

Leading Seaman (Acting) Henry Lowe, R.N.R., Dev., No. B. 2542.

Ordinary Seaman George Ripley, new Army recruit, C. Co., (now R.N.V.R.), K.W./755.

Ordinary Seaman T. Machen, new Army recruit, C Co. (now R.N.V.R.).

ROYAL MARINE BRIGADE.

R.F.R. Ch. 661. Sergeant-Major (Acting) James Thomas Galiford, R.M.L.I.

R.F.R. Ch. 426. Quartermaster-Sergeant George James Kenny, R.M.L.I.

R.F.R. Ch. 631. Sergeant Gideon Harry Bruce, R.M.L.I.

Ch. 18717. Lance-Corporal Thomas Charles Franks, R.M.L.I.

Ply. 7685. Lance-Corporal Walter John Cook, R.M.L.I.

R.F.R. Ch. 194. Private George Henry Hall, R.M.L.I.

R.F.R. Ch. 1585. Private Charles Joseph Fleet, R.M.L.I.

Ch. 18446. Private Stuart Lang, R.M.L.I.

Senior Reserve Attendant Edmund Walch, Royal Naval Auxiliary Sick Berth Reserve, O.N., M. 9522.

CAPTURE OF THE GERMAN CRUISER "EMDEN" BY
H.M.A.S. "SYDNEY."

On Monday, November 9th, 1914.

PUBLISHED IN THE SUPPLEMENT TO THE "LONDON GAZETTE,"
No. 29025, OF JANUARY 1ST, 1915.

ADMIRALTY,
January 1st, 1915.

THE following despatch has been received from Captain John C. T. Glossop, reporting the capture of the German Cruiser *Emden* by H.M.A.S. *Sydney*.

A memorandum is also appended by the Director of the Air Department, Admiralty, containing a report on the aerial attack on the airship sheds and factory at Friedrichshafen. See p. 150.

Despatch from Captain Glossop.

H.M.A.S. "SYDNEY" AT COLOMBO,
November 15th, 1914.

SIR,

I have the honour to report that whilst on escort duty with the Convoy under the charge of Captain Silver, H.M.A.S. *Melbourne*, at 6.30 a.m., on Monday, November 9th, a wireless message from Cocos was heard reporting that a foreign warship

was off the entrance. I was ordered to raise steam for full speed at 7 a.m. and proceed thither. I worked up to 20 knots, and at 9.15 a.m. sighted land ahead and almost immediately the smoke of a ship, which proved to be H.I.G.M.S. *Emden* coming out towards me at a great rate. At 9.40 a.m. fire was opened, she firing the first shot. I kept my distance as much as possible to obtain the advantage of my guns. Her fire was very accurate and rapid to begin with, but seemed to slacken very quickly, all casualties occurring in this ship almost immediately. First the foremost funnel of her went, secondly the foremast, and she was badly on fire aft, then the second funnel went, and lastly the third funnel, and I saw she was making for the beach on North Keeling Island, where she grounded at 11.20 a.m. I gave her two more broadsides and left her to pursue a merchant ship which had come up during the action.

2. Although I heard guns on this merchant ship at odd times during the action I had not fired, and as she was making off fast I pursued and overtook her at 12.10, firing a gun across her bows, and hoisting International Code Signal to stop, which she did. I sent an armed boat and found her to be the S.S. *Buresk*, a captured British collier, with 18 Chinese crew, 1 English steward, 1 Norwegian cook, and a German prize crew of 3 officers, 1 warrant officer, and 12 men. The ship unfortunately was sinking, the Kingston knocked out and damaged to prevent repairing, so I took all on board, fired 4 shells into her and returned to *Emden*, passing men swimming in the water, for whom I left 2 boats I was towing from *Buresk*.

3. On arriving again off *Emden* she still had her colours up at mainmast head. I inquired by signal, International Code, "Will you surrender?" and received a reply in Morse, "What signal? No signal books." I then made in Morse, "Do you surrender?" and subsequently "Have you received my signal?" to neither of which did I get an answer. The German officers on board gave me to understand that the Captain would never surrender, and therefore, though reluctantly, I again fired at her at 4.30 p.m., ceasing at 4.35, as she showed white flags and hauled down her ensign by sending a man aloft.

4. I then left *Emden* and returned and picked up the *Buresk's* two boats, rescuing 2 sailors (5 p.m.), who had been in the water all day. I returned and sent in one boat to *Emden*, manned by her own prize crew from *Buresk*, and 1 officer, and stating I would return to their assistance next morning. This I had to do, as I was desirous to find out the condition of cables and Wireless Station at Direction Island. On the passage over I was again delayed by rescuing another sailor (6.30 p.m.), and by the time I was again ready and approaching Direction Island it was too late for the night.

5. I lay on and off all night and communicated with Direction Island at 8 a.m., November 10th, to find that the *Emden's* party, consisting of 3 officers and 40 men, 1 launch and 2 cutters, had seized and provisioned a 70-ton schooner (the *Ayesha*), having 4 Maxims, with 2 belts to each. They left the previous night at six o'clock. The Wireless Station was entirely destroyed. 1 cable cut, 1 damaged, and 1 intact. I borrowed a doctor and 2 assistants, and proceeded as fast as possible to *Emden's* assistance.

6. I sent an officer on board to see the Captain, and in view of the large number of prisoners and wounded and lack of accommodation, etc., in this ship, and the absolute impossibility of leaving them where they were, he agreed that if I received his officers and men and all wounded, "then as for such time as they remained in *Sydney* they would cause no interference with ship or fittings, and would be amenable to the ship's discipline." I therefore set to work at once to tranship them—a most difficult operation, the ship being on weather side of island and the send alongside very heavy. The conditions in the *Emden* were indescribable. I received the last from her at 5 p.m., then had to go round to the lee side to pick up 20 more men who had managed to get ashore from the ship.

7. Darkness came on before this could be accomplished, and the ship again stood off and on all night, resuming operations at 5 a.m. on November 11th, a cutter's crew having to land with stretchers to bring wounded round to embarking point. A German officer, a doctor, died ashore the previous day. The ship in the meantime ran over to Direction Island to return their doctor and assistants, send cables, and was back again at 10 a.m., embarked the remainder of wounded, and proceeded for Colombo by 10.35 a.m., Wednesday, November 11th.

8. Total casualties in *Sydney*: killed 3, severely wounded (since dead) 1, severely wounded 4, wounded 4, slightly wounded 4.

9. In the *Emden* I can only approximately state the killed at 7 officers and 108 men from Captain's statement. I had on board 11 officers, 9 warrant officers, and 191 men, of whom 3 officers and 53 men were wounded, and of this number 1 officer and 3 men have since died of wounds.

10. The damage to *Sydney's* hull and fittings was surprisingly small; in all about ten hits seem to have been made. The engine and boiler rooms and funnels escaped entirely.

11. I have great pleasure in stating that the behaviour of the ship's company was excellent in every way, and with such a large proportion of young hands and people under training it is all the more gratifying. The engines worked magnificently, and higher results than trials were obtained, and I cannot speak too highly of the Medical Staff and arrangements on subsequent

trip, the ship being nothing but a hospital of a most painful description.

I have the honour to be,

Sir,

Your obedient Servant,

JOHN C. T. GLOSSOP,

Captain.

The Secretary of the Admiralty.

EXTRACTS FROM SUPPLEMENTS TO THE "LONDON GAZETTE,"
No. 29024 OF JANUARY 1ST, 1915, AND No. 29123 OF
APRIL 10TH, 1915.

LORD CHAMBERLAIN'S OFFICE,
ST. JAMES'S PALACE, S.W.
January 1st, 1915.

The King has been graciously pleased to give orders for the following appointments to the Most Honourable Order of the Bath :

To be an Ordinary Member of the Military Division of the 3rd Class or Companion of the said Most Honourable Order :

Captain John Collings Taswell Glossop, R.N. (H.M.A.S. *Sydney*).

ADMIRALTY,
April 10th, 1915.

The following awards have been made :

To receive the Distinguished Service Medal.

For services in the action between H.M.A.S. *Sydney* and the German Cruiser *Emden* on November 9th, 1914.

Arthur W. Lambert, Chief Petty Officer, R.A.N. 7899.

Bertie Green, Able Seaman, R.A.N. 2511.

Joseph Kinniburgh, Able Seaman, R.A.N. 2907.

Harold M. Collins, Able Seaman, R.A.N. 3157.

William Alfred Taylor, Able Seaman, R.A.N. 2820.

Thomas Edward Mullins, Sick Berth Steward, R.A.N. 1606.

PROCEEDINGS OF THE FLOTILLA OFF THE COAST OF
BELGIUM.

Between October 17th and November 9th, 1914.

PUBLISHED IN THE SUPPLEMENT TO THE "LONDON GAZETTE,"
No. 29126, APRIL 13TH, 1914.

ADMIRALTY,
April 13th, 1915.

The following despatch has been received from Rear-Admiral the Hon. Horace L. A. Hood, C.B., M.V.O., D.S.O., reporting the proceedings of the flotilla off the coast of Belgium between October 17th and November 9th, 1914:

OFFICE OF REAR-ADMIRAL,
DOVER PATROL,
November 11th, 1914.

SIR,—I have the honour to report the proceedings of the flotilla acting off the coast of Belgium, between October 17th and November 9th.

The flotilla was organised to prevent the movement of large bodies of German troops along the coast roads from Ostend to Nieuport, to support the left flank of the Belgian Army, and to prevent any movement by sea of the enemy's troops.

Operations commenced during the night of October 17th, when the *Attentive*, flying my flag, accompanied by the monitors *Severn*, *Humber*, and *Mersey*, the light cruiser *Foresight*, and several torpedo-boat destroyers, arrived and anchored off Nieuport Pier.

Early on the morning of October 18th information was received that German infantry were advancing on Westende village, and that a battery was in action at Westende Bains. The flotilla at once proceeded up past Westende and Middlekirke to draw the fire and endeavour to silence the guns.

A brisk shrapnel fire was opened from the shore, which was immediately replied to, and this commenced the naval operations on the coast which continued for more than three weeks without intermission.

During the first week the enemy's troops were endeavouring to push forward along the coast roads, and a large accumulation of transport existed within reach of the naval guns.

On October 18th machine guns from the *Severn* were landed at Nieuport to assist in the defence, and Lieutenant E. S. Wise fell, gallantly leading his men.

The *Amazon*, flying my flag, was badly holed on the water-line and was sent to England for repairs, and during these early

days most of the vessels suffered casualties, chiefly from shrapnel shell from the field guns of the enemy.

The presence of the ships on the coast soon caused alterations in the enemy's plans, less and less of their troops were seen, while more and more heavy guns were gradually mounted among the sand dunes that fringe the coast.

It soon became evident that more and heavier guns were required in the flotilla. The scouts therefore returned to England, while H.M.S. *Venerable* and several older cruisers, sloops, and gunboats arrived to carry on the operations.

Five French torpedo-boat destroyers were placed under my orders by Admiral Favereau, and on October 30th I had the honour of hoisting my flag in the *Intrépide* and leading the French flotilla into action off Lombartzyde. The greatest harmony and enthusiasm existed between the Allied flotillas.

As the heavier guns of the enemy came into play it was inevitable that the casualties of the flotilla increased, the most important being the disablement of the 6-inch turret and several shots on the waterline of the *Mersey*, the death of the Commanding Officer and eight men and the disablement of sixteen others in the *Falcon*, which vessel came under a heavy fire when guarding the *Venerable* against submarine attack; the *Wildfire* and *Vestal* were badly holed, and a number of casualties caused in the *Brilliant* and *Rinaldo*.

Enemy submarines were seen and torpedoes were fired, and during the latter part of the operations the work of the torpedo-craft was chiefly confined to the protection of the larger ships.

It gradually became apparent that the rush of the enemy along the coast had been checked, that the operations were developing into a trench warfare, and that the work of the flotilla had, for the moment, ceased.

The arrival of Allied reinforcements and the inundation of the country surrounding Nieuport rendered the further presence of the ships unnecessary.

The work of the squadron was much facilitated by the efforts of Colonel Bridges, attached to the Belgian Headquarters, and to him I am greatly indebted for his constant and unflinching support.

I would like especially to bring to your notice :

Capitaine de frégate Richard, of the *Dunois*, Senior Officer of the French flotilla, whose courtesy and gallantry assisted to make the operations a success.

Captain C. D. Johnson, M.V.O., in charge of 6th Destroyer Flotilla.

Commander Eric J. A. Fullerton, in command of the monitors, whose ships were constantly engaged in the inshore fighting.

Commander A. D. M. Cherry, of the *Vestal*, who commanded

the sloops, which were constantly engaged for the whole period. He remained in command of the flotilla after my departure on November 7th, and continued the bombardment on November 8th, returning to England the next day.

Commander H. C. Halahan, of the *Bustard*, whose gunboat was constantly in action close to the shore.

Commander A. L. Snagge, of the *Humber*.

Commander H. G. L. Oliphant, of the *Amazon*.

Lieutenant-Commander R. A. Wilson, of the *Mersey*.

Lieutenant-Commander G. L. D. Gibbs, of the *Crusader*, in which ship my flag was hoisted during most of the operations.

Lieutenant-Commander J. B. Adams, R.N.R., on my staff.

Lieutenant H. O. Wauton, of the *Falcon*, who maintained his position in a heavy fire on the look-out for submarines, and was unfortunately killed.

Lieutenant H. O. Joyce, of the *Vestal*, who was badly wounded by a shell, but rallied his men to attend to the wounded, and then got his gun again into action.

Sub-Lieutenant C. J. H. DuBoulay, of the *Falcon*, who took command of his ship after the captain and 24 men were killed and wounded.

Petty-Officer Robert Chappell, O.N. 207788, of the *Falcon*, who, though both legs were shattered and he was dying, continued to try and assist in the tending of the wounded. He shortly afterwards died of his wounds.

Petty-Officer Fredk. William Motteram, of the *Falcon*, O.N. 183216, for immediate attention to the wounded under fire on October 28th.

Able Seaman Ernest Dimmock, of the *Falcon*, O.N. 204549, who directly the casualties occurred in *Falcon*, finding himself the only person unwounded on deck, went immediately to the helm and conned the ship.

Herbert Edward Sturman, of the *Mersey*, Boy, 1st class O.N.J. 24887, who, when wounded by shrapnel, continued to serve the guns.

Leading Seaman John Thos. Knott, O.N.J. 1186, of the *Brilliant*, who, all men at his gun being killed or wounded, and himself severely wounded, endeavoured to fight his gun.

The following are specially recommended by their Commanding Officers for their good behaviour and coolness under fire :

Chief Engine Room Artificer William Ernest Brading, of the *Falcon*, O.N. 268579.

Private R.M.L.I. Alfred J. Foster, of the *Brilliant*, O.N. Ch. /10605.

Petty-Officer Sydney Edric Murphy, of the *Mersey*, O.N. 190841.

Petty-Officer Henry Sayce, of the *Mersey*, O.N. 132956.

Herbert Edward Sturman (Boy), of the *Mersey*, O.N.J. 24887.

Leading Signalman Cyril Henry Swan, of the *Sirius*, R.F.R., O.N. 230592.

Petty-Officer James Weatherhead, of the *Rinaldo*, O.N. 127747.

Leading Seaman John Keane, of the *Rinaldo*, O.N. 204128.

Private R.M.L.I. Joseph Martin, of the *Humber* (who landed with Marine detachment), O.N. Ch. /15582.

Stoker, 1st, Samuel Johnston, of the *Humber*, O.N. Ch. /282822 (R.F.R. Ch. B. 4090).

Petty-Officer Robt. Frederick Jennings, of the *Vestal*, O.N. 157343 (R.F.R. Po. B. 1481).

Petty-Officer Charles Henry Sutton, of the *Vestal*, O.N. 158086.

Leading Seaman Frederick Stanley Woodruff, of the *Vestal*, O.N. 237062.

Able Seaman William Chapman, of the *Vestal*, O.N. 183312 (R.F.R. Po. B. 1666).

Officer's Steward James Whiteman, of the *Vestal*, O.N.L. 1275.

I beg to append a list of the vessels engaged.

I have the honour to be, Sir,

Your obedient servant,

HORACE HOOD,

Rear-Admiral, Dover Patrol.

The Secretary of the Admiralty.

Enclosure to Rear-Admiral Hood's despatch of November 11th.

LIST OF SHIPS WHICH TOOK PART IN OPERATIONS
OFF BELGIAN COAST.

Venerable, Captain V. H. G. Bernard.

Attentive, Captain C. D. Johnson, M.V.O.

Foresight, Captain H. N. Garnett.

Brilliant, Captain (ret.) H. Christian.

Sirius, Commander (ret.) W. H. Boys.

Severn, Commander E. J. A. Fullerton.

Humber, Commander A. L. Snagge.

Mersey, Lieutenant-Commander R. A. Wilson.

Vestal, Commander A. D. M. Cherry.

Rinaldo, Commander H. J. Kennard.

Wildfire, Commander E. Altham.

Bustard, Commander H. C. Halahan.

Excellent, Lieutenant-Commander (ret.) E. A. Digby.

Crane, Commander R. H. Coppinger.

Falcon, Lieutenant H. O. Wauton (killed).

Flirt, Lieutenant H. S. Braddyll.

Mermaid, Lieutenant P. R. P. Percival.

Myrmidon, Lieutenant-Commander (ret.) R. H. B. Hammond-Chambers.
Racehorse, Lieutenant E. P. U. Pender.
Syren, Commander T. C. H. Williams.
Amazon, Commander H. G. L. Oliphant.
Cossack, Lieutenant-Commander G. C. Harrison.
Crusader, Lieutenant-Commander G. L. D. Gibbs.
Maori, Lieutenant-Commander B. W. Barrow.
Mohawk, Commander E. R. G. R. Evans, C.B.
Hazard, Commander N. E. Archdale.
Nubian, Commander C. E. Cundall.
Viking, Lieutenant J. P. Gibbs.
Lizard, Lieutenant-Commander Evelyn C. O. Thomson.
Lapwing, Lieutenant-Commander Alexander H. Gye.
Submarine C-32, Lieutenant-Commander B. V. Layard.
Submarine C-34, Lieutenant-Commander J. F. Hutchings.
Dunois, Capitaine de frégate Richard.
Capitaine Mehl, Lieutenant de vaisseau Rossignal.
Francis-Garnier, Lieutenant de vaisseau de Pianelli.
Intrépide, Lieutenant de vaisseau Vaudier.
Aventurier, Lieutenant de vaisseau Semichon.

EXTRACT FROM SUPPLEMENT TO THE "LONDON GAZETTE" OF
JANUARY 1ST, 1915, No. 29024.

ADMIRALTY,
January 1st, 1915.

The King has been graciously pleased to give orders for the award of the Distinguished Service Cross to the undermentioned Officer :

Lieutenant Harold Owen Joyce, R.N., late H.M.S. *Vestal*.

The following awards have also been made :

To receive the Distinguished Service Medal.

For the operations off the Belgian Coast from October 17th to November 9th, 1914 :

Falcon, Petty Officer Robert Chappell, O.N. 207788 (since died of wounds received in action).

Falcon, Petty Officer Frederick William Georgeson Motteram, O.N. 183216.

Brilliant, Leading Seaman John Thomas Knott, O.N.J. 1186.

Falcon, Able Seaman Ernest Dimmock, O.N. 204549.

Mersey, Boy, 1st Class, Herbert Edward Sturman, O.N.J. 24887.

MEMORANDUM BY THE DIRECTOR OF THE AIR DEPARTMENT.
PUBLISHED IN THE SUPPLEMENT TO THE "LONDON GAZETTE,"
No. 29025, OF JANUARY 1ST, 1915.

ADMIRALTY,
December 17th, 1914.

On November 21st, 1914, Squadron Commander E. F. Briggs, Flight Commander J. T. Babington, and Flight Lieutenant S. V. Sippe, Royal Navy, carried out an aerial attack on the Zeppelin airship sheds and factory at Friedrichshafen on Lake Constance.

Leaving French territory shortly before 10 a.m., they arrived over their objective at about noon, and, although under a very heavy rifle, machine-gun, and shrapnel fire from the moment they were sighted, they all three dived steeply to within a few hundred feet of the sheds, when they released their bombs—in all eleven.

Squadron Commander Briggs was wounded, brought down, and made a prisoner, but the other two officers regained their starting-point after a flight of more than four hours across hostile country under very bad weather conditions.

It is believed that the damage caused by this attack includes the destruction of one airship and serious damage to the larger shed, and also demolition of the hydrogen-producing plant, which had only lately been completed. Later reports stated that flames of considerable magnitude were seen issuing from the factory immediately after the raid.

EXTRACT FROM SUPPLEMENT TO THE "LONDON GAZETTE" OF
JANUARY 1ST, 1915, No. 29024.

The King has been graciously pleased to give orders for the following appointments to the Distinguished Service Order and for the Award of the Distinguished Cross in respect of the under-mentioned Officers :

To be Companions of the Distinguished Service Order.

Squadron Commander Edward Featherstone Briggs, Royal Naval Air Service.

Flight Commander John Tremayne Babington, Royal Naval Air Service.

Flight Lieutenant Sidney Vincent Sippe, Royal Naval Air Service.

MINE-SWEEPING OPERATIONS OFF SCARBOROUGH.

From December 19th to 31st, 1914.

PUBLISHED IN THE SUPPLEMENT TO THE "LONDON GAZETTE,"
No. 29076, OF FEBRUARY 19TH, 1915.

ADMIRALTY,
February 19th, 1915.

THE following Memorandum has been furnished by the Admiral Commanding the East Coast Mine-sweepers, detailing the recent mine-sweeping operations off Scarborough :

From December 19th to 31st sweeping operations were conducted by the East Coast Mine-sweepers with the object of clearing the minefield which had been laid by the enemy off Scarborough.

At the beginning there was no indication of the position of the mines, although owing to losses of passing merchant ships it was known that a minefield had been laid.

In order to ascertain how the mines lay it was necessary to work at all times of tide with a consequent large increase in the element of danger.

The following officers are specially noticed for their services during the operations :

Commander Richard H. Walters, R.N., A.M.S. Staff, was in charge of the whole of the mine-sweeping operations from December 19th to 31st. During this period a large number of mines were swept up and destroyed. By December 25th, a channel had been cleared, and traffic was able to pass through by daylight.

Commander (now Captain) Lionel G. Preston, R.N., H.M.S. *Skipjack*, on December 19th, proceeded at once into the middle of the area where the mines had exploded to give assistance to the damaged trawlers. He anchored between the trawlers and the mines which had been brought to the surface, and proceeded to sink them.

Lieutenant Godfrey Craik Parsons, R.N., H.M.S. *Pekin*, displayed great skill and devotion to duty in continuing to command his group of trawlers after having been mined in Trawler No. 58 on December 19th. On this day his group exploded eight mines, and brought to the surface six more, Trawler No. 99 being blown up and Nos. 58 and 465 damaged, all in the space of about ten minutes.

- Lieutenant H. Boothby, R.N.R., H.M.S. *Pekin*. When Trawler No. 99 (*Orianda*) in which he was serving was blown up by a mine on December 19th, Lieutenant Boothby successfully got all his crew (except one who was killed) into safety. Lieutenant Boothby was again blown up on January 6th, 1915, in Trawler No. 450 (*The Banyers*).
- Lieutenant C. V. Crossley, R.N.R., H.M.S. *Pekin*. Whilst sweeping on December 19th, three violent explosions occurred close under the stern of his ship, Trawler No. 465 (*Star of Britain*). He controlled the crew, and himself crawled into a confined space near the screw shaft, discovered the damage, and temporarily stopped the leak sufficiently to enable the pumps to keep the water down and save the ship.
- Skipper Thomas William Trendall, R.N.T.R., Trawler *Solon*, No. 55, on his own responsibility went to the assistance of the Steamer *Gallier*, which had just been mined on the night of December 25th. It was low water at the time and dark, and the *Gallier* was showing no lights, so had to be searched for in the mine field.
- Skipper Ernest V. Snowline, R.N.T.R., Drifter *Hilda and Ernest*, No. 201, carried out his duties as Commodore of the Flotilla of Lowestoft drifters under Chief Gunner Franklin, R.N., in a most satisfactory manner. He kept to his station in heavy weather, standing by the S.S. *Gallier* after she had been damaged by a mine.
- Lieutenant W. G. Wood, R.N.R., Trawler, *Restrivo*, No. 48, did excellent work in going to the assistance of damaged trawlers on December 19th, and performed the risky duty of crossing the mine field at low water when sent to bring in the *Valiant*, which had been disabled by a mine.
- Skipper George W. Thornton, R.N.T.R., Trawler *Passing*, No. 58, displayed great coolness and rendered valuable assistance to Lieutenant Parsons in controlling the crew when No. 58 had been mined.
- Skipper William Allerton, R.N.T.R., Drifter *Eager*, No. 202, kept to his station in heavy weather, standing by the S.S. *Gallier* after she had been damaged by a mine.
- Sub-Lieutenant W. L. Scott, R.N.R., Drifter *Principal*, went alongside the Trawler *Garmo* in a dinghy to rescue a man at considerable risk to himself, and his boat, as the vessel was floating nearly vertical at the time, with only the forecastle above water. She turned completely over and sank a few minutes after he left her.
- Skipper Thomas B. Belton, R.N.T.R., Drifter *Retriever*, No. 223, kept to his station, marking the safe channel for shipping when all other drifters were driven in by the weather.

The following are also commended for Good Service done under dangerous conditions :

Robert A. Gray, Engineman, R.N.R. No. 694ES, M.S.Tr. No. 465.

William A. Lewis, P.O., Icl., O.N. 178498, M.S.Tr. No. 450.

Christopher Briggs, Engineman, R.N.R. No. 1542ES, M.S.Tr. No. 450.

William Gladding, Cook, R.N.R. No. 223T.C., M.S.Tr. No. 450.

Robert Frost, Second Hand, R.N.R. No. 81D.A., M.S.Tr. No. 43.

Edwin F. Frankland, Deck Hand, R.N.R. No. 2481D.A., M.S.Tr. No. 49.

George Newman, Engineman, R.N.R. No. 625ES, M.S.Tr. No. 451.

William R. Kemp, Engineman, R.N.R. No. 846ES, M.S.Tr. No. 49.

The King has been graciously pleased to give orders for the following appointment to the Distinguished Service Order and for the award of the Distinguished Service Cross in respect of the undermentioned Officers, in recognition of their services mentioned in the foregoing despatch :

To be a Companion of the Distinguished Service Order.

Lieutenant H. Boothby, R.N.R.

To receive the Distinguished Service Cross.

Lieutenant C. V. Crossley, R.N.R.

Skipper Thomas William Trendall, R.N.T.R.

Skipper Ernest V. Snowline, R.N.T.R.

The following awards have also been made :

To receive the Distinguished Service Medal.

Robert A. Gray, Engineman, R.N.R., No. 694ES.

William A. Lewis, Petty Officer, 1st Class, O.N. 178498.

Christopher Briggs, Engineman, R.N.R., No. 1542ES.

William Gladding, Cook, R.N.R., No. 223TC.

Robert Frost, Second Hand, R.N.R., No. 81DA.

COMBINED OPERATIONS BY H.M. SHIPS AND NAVAL SEAPLANES

On December 25th, 1914.

PUBLISHED IN THE SUPPLEMENT TO THE "LONDON GAZETTE,"
No. 29076, OF FEBRUARY 19TH, 1915.

ADMIRALTY MEMORANDUM on the combined operations by H.M.
Ships and Naval Seaplanes on December 25th, 1914.

On December 25th, 1914, an air reconnaissance of the Heligoland Bight, including Cuxhaven, Heligoland, and Wilhelmshaven, was made by naval seaplanes, and the opportunity was taken at the same time of attacking with bombs points of military importance. The reconnaissance involved combined operations by light cruisers, destroyers, and seaplane-carriers, under Commodore Reginald Y. Tyrwhitt, C.B., and submarines acting under the orders of Commodore Roger Keyes, C.B., M.V.O.

The vessels detailed for the operations arrived at their rendezvous before daylight, and as soon as the light was sufficient the seaplanes were hoisted out and despatched. The following Air Service officers and observers took part in the reconnaissance :

Pilots.

Flight Commander (now Squadron Commander) Douglas Austin Oliver.

Flight Commander Francis Esme Theodore Hewlett.

Flight Commander Robert Peel Ross.

Flight Commander Cecil Francis Kilner.

Flight Lieutenant (now Flight Commander) Arnold John Miley.

Flight Lieutenant Charles Humphrey Kingsman Edmonds.

Flight Sub-Lieutenant (now Flight Lieutenant) Vivian Gaskell Blackburn.

Observers.

Lieutenant Erskine Childers, R.N.V.R.

C.P.O. Mechanic James W. Bell.

C.P.O. Mechanic Gilbert H. W. Budds.

The seaplane-carriers were commanded by :

Squadron Commander Cecil J. L'Estrange Malone.

Flight Commander Edmund D. M. Robertson.

Flight Commander Frederick W. Bowhill.

At the beginning of the flight the weather was clear, but on nearing the land the seaplanes met with thick weather, and were

compelled to fly low, thus becoming exposed to a heavy fire at short range from ships and shore batteries. Several machines were hit, but all remained in the air for over three hours, and succeeded in obtaining valuable information regarding the disposition of the enemy's ships and defences. Bombs were also dropped on military points. In the meanwhile German submarines, seaplanes, and Zeppelins delivered a combined attack upon the light cruisers, destroyers, and seaplane-carriers, but were driven off.

Flight Commanders Kilner and Ross and Flight Lieutenant Edmonds regained their ships. Flight Commander Oliver, Flight Lieutenant Miley and Flight Sub-Lieutenant Blackburn became short of fuel, and were compelled to descend near Submarine *E-11*, which with other submarine vessels was watching inshore to assist any seaplane that might be in difficulties. Lieutenant-Commander Martin E. Nasmith, commanding *E-11*, although attacked by an airship, succeeded, by his coolness and resource, in rescuing the three pilots. Flight Commander Hewlett, after a flight of 3½ hours, was compelled to descend on account of engine trouble, but was rescued by a Dutch trawler, landed in Holland, and returned safely to England.

An expression of their Lordships' appreciation has been conveyed to Commodore Keyes (Commodore S), Commodore Tyrwhitt (Commodore T), and to Captain Sueter (Director of the Air Department), for their share in the combined operations which resulted in this successful reconnaissance.

The King has been graciously pleased to give orders for the following appointments to the Distinguished Service Order :

To be Companions of the Distinguished Service Order.

Captain Cecil Francis Kilner, R.M.L.I. (Flight Commander).
Lieutenant Charles Humphrey Kingsman Edmonds, R.N.
(Flight Lieutenant).

The following awards have also been made :

To receive the Distinguished Service Medal.

Chief Petty Officer Mechanic James William Bell, No. M. 489.
Chief Petty Officer Mechanic Gilbert Howard William Budds,
No. 271764.

ADMIRALTY, February 19th, 1915.

ACTION OFF THE FALKLAND ISLANDS

On Tuesday, December 8th, 1914.

PUBLISHED IN THE SUPPLEMENT TO THE "LONDON GAZETTE,"
No. 29087, OF MARCH 3RD, 1915.

ADMIRALTY,
March 3rd, 1915.

The following despatch has been received from Vice-Admiral Sir F. C. Doveton Sturdee, K.C.B., C.V.O., C.M.G., reporting the action off the Falkland Islands on Tuesday, December 8th, 1914 :

" INVINCIBLE " AT SEA,
December 19th, 1914.

SIR,

I have the honour to forward a report on the action which took place on December 8th, 1914, against a German Squadron off the Falkland Islands.

I have the honour to be,
Sir,

Your obedient Servant,

F. C. D. STURDEE,
Vice-Admiral, Commander-in-Chief.

The Secretary,
Admiralty.

- (a) Preliminary Movements.
- (b) Action with the Armoured Cruisers.
- (c) Action with the Light Cruisers.
- (d) Action with the Enemy's Transports.

(a) *Preliminary Movements*

The squadron—consisting of H.M. ships *Invincible*, flying my flag, Flag Captain Percy T. H. Beamish; *Inflexible*, Captain Richard F. Phillimore; *Carnarvon*, flying the flag of Rear-Admiral Archibald P. Stoddart, Flag Captain Harry L. d'E. Skipwith; *Cornwall*, Captain Walter M. Ellerton; *Kent*, Captain John D. Allen; *Glasgow*, Captain John Luce; *Bristol*, Captain Basil H. Fanshawe; and *Macedonia*, Captain Bertram S. Evans—arrived at Port Stanley, Falkland Islands, at 10.30 a.m. on Monday, December 7th, 1914. Coaling was commenced at once, in order that the ships should be ready to resume the search for the enemy's squadron the next evening, December 8th.

At 8 a.m. on Tuesday, December 8th, a signal was received from the signal station on shore :

"A four-funnel and two-funnel man-of-war in sight from Sapper Hill, steering northwards."

At this time, the positions of the various ships of the squadron were as follows :

Macedonia : At anchor as look-out ship.
Kent (guard ship) : At anchor in Port William.
Invincible and *Inflexible* : In Port William.
Carnarvon : In Port William.
Cornwall : In Port William.
Glasgow : In Port Stanley.
Bristol : In Port Stanley.

The *Kent* was at once ordered to weigh, and a general signal was made to raise steam for full speed.

At 8.20 a.m. the signal station reported another column of smoke in sight to the southward, and at 8.45 a.m. the *Kent* passed down the harbour and took up a station at the entrance.

The *Canopus*, Captain Heathcoat S. Grant, reported at 8.47 a.m. that the first two ships were eight miles off, and that the smoke reported at 8.20 a.m. appeared to be the smoke of two ships about twenty miles off.

At 8.50 a.m. the signal station reported a further column of smoke in sight to the southward.

The *Macedonia* was ordered to weigh anchor on the inner side of the other ships, and await orders.

At 9.20 a.m. the two leading ships of the enemy (*Gneisenau* and *Nürnberg*), with guns trained on the wireless station, came within range of the *Canopus*, who opened fire at them across the low land at a range of 11,000 yards. The enemy at once hoisted their colours and turned away. At this time the masts and smoke of the enemy were visible from the upper bridge of the *Invincible* at a range of approximately 17,000 yards across the low land to the south of Port William.

A few minutes later the two cruisers altered course to port, as though to close the *Kent* at the entrance to the harbour, but about this time it seems that the *Invincible* and *Inflexible* were seen over the land, as the enemy at once altered course and increased speed to join their consorts.

The *Glasgow* weighed and proceeded at 9.40 a.m. with orders to join the *Kent* and observe the enemy's movements.

At 9.45 a.m. the squadron—less the *Bristol*—weighed, and proceeded out of harbour in the following order : *Carnarvon*, *Inflexible*, *Invincible*, and *Cornwall*. On passing Cape Pembroke Light, the five ships of the enemy appeared clearly in sight to the south-east, hull down. The visibility was at its maximum, the sea was calm, with a bright sun, a clear sky, and a light breeze from the north-west.

At 10.20 a.m. the signal for a general chase was made. The battle-cruisers quickly passed ahead of the *Carnarvon* and over-

took the *Kent*. The *Glasgow* was ordered to keep two miles from the *Invincible*, and the *Inflexible* was stationed on the starboard quarter of the flagship. Speed was eased to 20 knots at 11.15 a.m. to enable the other cruisers to get into station.

At this time the enemy's funnels and bridges showed just above the horizon.

Information was received from the *Bristol* at 11.27 a.m. that three enemy ships had appeared off Port Pleasant, probably colliers or transports. The *Bristol* was therefore directed to take the *Macedonia* under his orders and destroy transports.

The enemy were still maintaining their distance, and I decided, at 12.20 p.m., to attack with the two battle-cruisers and the *Glasgow*.

At 12.47 p.m. the signal to "Open fire and engage the enemy" was made.

The *Inflexible* opened fire at 12.55 p.m. from her fore turret at the right-hand ship of the enemy, a light cruiser; a few minutes later the *Invincible* opened fire at the same ship.

The deliberate fire from a range of 16,500 to 15,000 yards at the right-hand light cruiser, who was dropping astern, became too threatening, and when a shell fell close alongside her at 1.20 she (the *Leipzig*) turned away, with the *Nürnberg* and *Dresden* to the south-west. These light cruisers were at once followed by the *Kent*, *Glasgow*, and *Cornwall*, in accordance with my instructions.

The action finally developed into three separate encounters, besides the subsidiary one dealing with the threatened landing.

(b) Action with the Armoured Cruisers.

The fire of the battle-cruisers was directed on the *Scharnhorst* and *Gneisenau*. The effect of this was quickly seen, when at 1.25 p.m., with the *Scharnhorst* leading, they turned about seven points to port in succession into line ahead and opened fire at 1.30 p.m. Shortly afterwards speed was eased to 24 knots, and the battle-cruisers were ordered to turn together, bringing them into line ahead, with the *Invincible* leading.

The range was about 13,500 yards at the final turn, and increased until, at 2 p.m., it had reached 16,450 yards.

The enemy then (2.10 p.m.) turned away about 10 points to starboard and a second chase ensued, until, at 2.45 p.m., the battle-cruisers again opened fire; this caused the enemy, at 2.53 p.m., to turn into line ahead to port and open fire at 2.55 p.m.

The *Scharnhorst* caught fire forward, but not seriously, and her fire slackened perceptibly; the *Gneisenau* was badly hit by the *Inflexible*.

At 3.30 p.m. the *Scharnhorst* led round about 10 points to

starboard; just previously her fire had slackened perceptibly, and one shell had shot away her third funnel; some guns were not firing, and it would appear that the turn was dictated by a desire to bring her starboard guns into action. The effect of the fire on the *Scharnhorst* became more and more apparent in consequence of smoke from fires, and also escaping steam; at times a shell would cause a large hole to appear in her side, through which could be seen a dull red glow of flame. At 4.4 p.m. the *Scharnhorst*, whose flag remained flying to the last, suddenly listed heavily to port, and within a minute it became clear that she was a doomed ship; for the list increased very rapidly until she lay on her beam ends, and at 4.17 p.m. she disappeared.

The *Gneisenau* passed on the far side of her late flagship, and continued a determined but ineffectual effort to fight the two battle-cruisers.

At 5.8 p.m. the forward funnel was knocked over and remained resting against the second funnel. She was evidently in serious straits, and her fire slackened very much.

At 5.15 p.m. one of the *Gneisenau's* shells struck the *Invincible*; this was her last effective effort.

At 5.30 p.m. she turned towards the flagship with a heavy list to starboard, and appeared stopped, with steam pouring from her escape-pipes, and smoke from shell and fires rising everywhere. About this time I ordered the signal "Cease fire," but before it was hoisted the *Gneisenau* opened fire again, and continued to fire from time to time with a single gun.

At 5.40 p.m. the three ships closed in on the *Gneisenau*, and, at this time, the flag flying at her fore truck was apparently hauled down, but the flag at the peak continued flying.

At 5.50 p.m. "Cease fire" was made.

At 6 p.m. the *Gneisenau* heeled over very suddenly, showing the men gathered on her decks and then walking on her side as she lay for a minute on her beam ends before sinking.

The prisoners of war from the *Gneisenau* report that, by the time the ammunition was expended, some 600 men had been killed and wounded. The surviving officers and men were all ordered on deck and told to provide themselves with hammocks and any articles that could support them in the water.

When the ship capsized and sank there were probably some 200 unwounded survivors in the water, but, owing to the shock of the cold water, many were drowned within sight of the boats and ship.

Every effort was made to save life as quickly as possible, both by boats and from the ships; life-buoys were thrown and ropes lowered, but only a proportion could be rescued. The *Invincible* alone rescued 108 men, fourteen of whom were found to be dead after being brought on board; these men were buried at sea the following day with full military honours.

(c) *Action with the Light Cruisers.*

At about 1 p.m., when the *Scharnhorst* and *Gneisenau* turned to port to engage the *Invincible* and *Inflexible*, the enemy's light cruisers turned to starboard to escape; the *Dresden* was leading, and the *Nürnberg* and *Leipzig* followed on each quarter.

In accordance with my instructions, the *Glasgow*, *Kent*, and *Cornwall* at once went in chase of these ships; the *Carnarvon*, whose speed was insufficient to overtake them, closed the battle-cruisers.

The *Glasgow* drew well ahead of the *Cornwall* and *Kent* and, at 3 p.m., shots were exchanged with the *Leipzig* at 12,000 yards. The *Glasgow's* object was to endeavour to out-range the *Leipzig* with her 6-inch guns and thus cause her to alter course and give the *Cornwall* and *Kent* a chance of coming into action.

At 4.17 p.m. the *Cornwall* opened fire, also on the *Leipzig*.

At 7.17 p.m. the *Leipzig* was on fire fore and aft, and the *Cornwall* and *Glasgow* ceased fire.

The *Leipzig* turned over on her port side and disappeared at 9 p.m. Seven officers and eleven men were saved.

At 3.36 p.m. the *Cornwall* ordered the *Kent* to engage the *Nürnberg*, the nearest cruiser to her.

Owing to the excellent and strenuous efforts of the engine-room department, the *Kent* was able to get within range of the *Nürnberg* at 5 p.m. At 6.35 p.m., the *Nürnberg* was on fire forward and ceased firing. The *Kent* also ceased firing and closed to 3,300 yards; as the colours were still observed to be flying in the *Nürnberg*, the *Kent* opened fire again. Fire was finally stopped five minutes later on the colours being hauled down, and every preparation was made to save life. The *Nürnberg* sank at 7.27 p.m., and as she sank, a group of men were waving a German ensign attached to a staff. Twelve men were rescued, but only seven survived.

The *Kent* had four killed and twelve wounded, mostly caused by one shell.

During the time the three cruisers were engaged with the *Nürnberg* and *Leipzig*, the *Dresden*, who was beyond her consorts, effected her escape owing to her superior speed. The *Glasgow* was the only cruiser with sufficient speed to have had any chance of success. However, she was fully employed in engaging the *Leipzig* for over an hour before either the *Cornwall* or *Kent* could come up and get within range. During this time the *Dresden* was able to increase her distance and get out of sight.

The weather changed after 4 p.m., and the visibility was much reduced; further, the sky was overcast and cloudy, thus assisting the *Dresden* to get away unobserved.

(d) Action with the Enemy's Transports.

A report was received at 11.27 a.m. from H.M.S. *Bristol* that three ships of the enemy, probably transports or colliers, had appeared off Port Pleasant. The *Bristol* was ordered to take the *Macedonia* under his orders and destroy the transports.

H.M.S. *Macedonia* reports that only two ships, steamships *Baden* and *Santa Isabel*, were present ; both ships were sunk after the removal of the crew.

I have pleasure in reporting that the officers and men under my orders carried out their duties with admirable efficiency and coolness, and great credit is due to the Engineer Officers of all the ships, several of which exceeded their normal full speed.

The names of the following are specially mentioned :

OFFICERS.

Commander Richard Herbert Denny Townsend, H.M.S. *Invincible*.

Commander Arthur Edward Frederick Bedford, H.M.S. *Kent*.

Lieutenant-Commander Wilfred Arthur Thompson, H.M.S. *Glasgow*.

Lieutenant-Commander Hubert Edward Danreuther, First and Gunnery Lieutenant, H.M.S. *Invincible*.

Engineer-Commander George Edward Andrew, H.M.S. *Kent*.

Engineer-Commander Edward John Weeks, H.M.S. *Invincible*.

Paymaster Cyril Sheldon Johnson, H.M.S. *Invincible*.

Carpenter Thomas Andrew Walls, H.M.S. *Invincible*.

Carpenter William Henry Venning, H.M.S. *Kent*.

Carpenter George Henry Egford, H.M.S. *Cornwall*.

PETTY OFFICERS AND MEN.

Chief Petty Officer David Leighton, O.N. 124238, H.M.S. *Kent*.

Petty Officer, 2nd Class, Matthew J. Walton (R.F.R., A. 1756), O.N. 118358, H.M.S. *Kent*.

Leading Seaman Frederick Sidney Martin, O.N. 233301, H.M.S. *Invincible*, Gunner's Mate, Gunlayer, 1st Class.

Signalman Frank Glover, O.N. 225731, H.M.S. *Cornwall*.

Chief Engine-Room Artificer, 2nd Class, John George Hill, O.N. 269646, H.M.S. *Cornwall*.

Acting Chief Engine-Room Artificer, 2nd Class, Robert Snowdon, O.N. 270654, H.M.S. *Inflexible*.

Engine-Room Artificer, 1st Class, George Henry Francis McCarten, O.N. 270023, H.M.S. *Invincible*.

Stoker Petty Officer George S. Brewer, O.N. 150950, H.M.S. *Kent*.

Stoker Petty Officer William Alfred Townsend, O.N. 301650, H.M.S. *Cornwall*.

Stoker, 1st Class, John Smith, O.N. SS. 111915, H.M.S. *Cornwall*.
Shipwright, 1st Class, Albert N. E. England, O.N. 341971, H.M.S.
Glasgow.

Shipwright, 2nd Class, Albert C. H. Dymott, O.N. M. 8047,
H.M.S. *Kent*.

Portsmouth R.F.R.B./3307 Sergeant Charles Mayes, H.M.S. *Kent*.
F. C. D. STURDEE.

CENTRAL CHANCERY OF THE ORDERS OF KNIGHTHOOD.

LORD CHAMBERLAIN'S OFFICE,
ST. JAMES'S PALACE, S.W.,
March 3rd, 1915.

The King has been graciously pleased to give orders for the following appointment to the Most Honourable Order of the Bath, in recognition of the services of the undermentioned officer mentioned in the foregoing despatch :

To be an Additional Member of the Military Division of the Third Class or Companion.

Captain John Luce, Royal Navy.

ADMIRALTY, S.W.,
March 3rd, 1915.

The King has been graciously pleased to give orders for the award of the *Distinguished Service Cross* to the undermentioned Officers, in recognition of their services mentioned in the foregoing despatch :

Carpenter Thomas Andrew Walls.

Carpenter William Henry Venning.

Carpenter George Henry Egford.

The following awards have also been made :

To receive the Conspicuous Gallantry Medal.

Portsmouth R.F.R.B./3307 Sergeant Charles Mayes, H.M.S. *Kent*. A shell burst and ignited some cordite charges in the casemate; a flash of flame went down the hoist into the ammunition passage. Sergeant Mayes picked up a charge of cordite and threw it away. He then got hold of a fire hose and flooded the compartment, extinguishing the fire in some empty shell bags which were burning. The extinction of this fire saved a disaster which might have led to the loss of the ship.

To receive the Distinguished Service Medal.

Chief Petty Officer David Leighton, O.N. 124238.

Petty Officer, 2nd Class, Matthew J. Walton (R.F.R., A. 1756),
O.N. 118358.

Leading Seaman Frederick Sidney Martin, O.N. 233301, Gunner's Mate, Gunlayer, 1st Class.

Signalman Frank Glover, O.N. 225731.

Chief Engine-Room Artificer, 2nd Class, John George Hill, O.N. 269646.

Acting Chief Engine-Room Artificer, 2nd Class, Robert Snowdon, O.N. 270654.

Engine-Room Artificer, 1st Class, George Henry Francis McCarten, O.N. 270023.

Stoker Petty Officer George S. Brewer, O.N. 150950.

Stoker Petty Officer William Alfred Townsend, O.N. 201650.

Stoker, 1st Class, John Smith, O.N. SS. 111915.

Shipwright, 1st Class, Albert N. E. England, O.N. 341971.

Shipwright, 2nd Class, Albert C. H. Dymott, O.N. M. 8047.

EXTRACT FROM THE "LONDON GAZETTE" OF MARCH 12TH, 1915.

CENTRAL CHANCERY OF THE ORDERS OF KNIGHTHOOD.

LORD CHAMBERLAIN'S OFFICE,

ST. JAMES'S PALACE, S.W.,

March 10th, 1915.

The King has been graciously pleased to give orders for the following appointment to the Most Honourable Order of the Bath in recognition of the meritorious services of the undermentioned officer during the War :

To be an Additional Member of the Military Division of the Third Class or Companion.

Captain John Derwent Allen, R.N., H.M.S. *Kent*.

ACTION IN THE NORTH SEA.

On Sunday, January 24th, 1915.

PUBLISHED IN THE SUPPLEMENT TO THE "LONDON GAZETTE,"
No. 29088, OF MARCH 3RD, 1915.

ADMIRALTY,
March 3rd, 1915.

The following despatch has been received from Vice-Admiral Sir David Beatty, K.C.B., M.V.O., D.S.O., commanding the First Battle-Cruiser Squadron, reporting the action in the North Sea on Sunday, January 24th, 1915 :

H.M.S. "PRINCESS ROYAL,"

February 2nd, 1915.

SIR,—I have the honour to report that at daybreak on January 24th, 1915, the following vessels were patrolling in company.

The battle-cruisers *Lion*, Captain Alfred E. M. Chatfield, C.V.O., flying my flag; *Princess Royal*, Captain Osmond de B. Brock, Aide-de-Camp; *Tiger*, Captain Henry B. Pelly, M.V.O.; *New Zealand*, Captain Lionel Halsey, C.M.G., Aide-de-Camp, flying the flag of Rear-Admiral Sir Archibald Moore, K.C.B., C.V.O.; and *Indomitable*, Captain Francis W. Kennedy.

The light cruisers *Southampton*, flying the broad pennant of Commodore William E. Goodenough, M.V.O.; *Nottingham*, Captain Charles B. Miller; *Birmingham*, Captain Arthur A. M. Duff; and *Lowestoft*, Captain Theobald W. B. Kennedy, were disposed on my port beam.

Commodore (T) Reginald Y. Tyrwhitt, C.B., in *Arethusa*, *Aurora*, Captain Wilmot S. Nicholson, *Undaunted*, Captain Francis G. St. John, M.V.O., *Arethusa*, and the Destroyer Flotillas were ahead.

At 7.25 a.m. the flash of guns was observed S.S.E. Shortly afterwards a report reached me from *Aurora* that she was engaged with enemy's ships. I immediately altered course to S.S.E., increased to 22 knots, and ordered the light cruisers and flotillas to chase S.S.E. to get in touch and report movements of enemy.

This order was acted upon with great promptitude, indeed my wishes had already been forestalled by the respective Senior Officers, and reports almost immediately followed from *Southampton*, *Arethusa*, and *Aurora* as to the position and composition of the enemy, which consisted of 3 battle-cruisers and *Blücher*, 6 light cruisers, and a number of destroyers, steering N.W. The enemy had altered course to S.E. From now onwards the light cruisers maintained touch with the enemy, and kept me fully informed as to their movements.

The battle-cruisers worked up to full speed, steering to the southward. The wind at the time was N.E., light, with extreme visibility. At 7.30 a.m. the enemy were sighted on the port bow, steaming fast, steering approximately S.E., distant 14 miles.

Owing to the prompt reports received we had attained our position on the quarter of the enemy, and so altered course to S.E. parallel to them, and settled down to a long, stern chase, gradually increasing our speed until we reached 28.5 knots. Great credit is due to the Engineer Staffs of *New Zealand* and *Indomitable*—these ships greatly exceeded their normal speed.

At 8.52 a.m., as we had closed to within 20,000 yards of the rear ship, the battle-cruisers manœuvred to keep on a line of bearing so that guns would bear, and *Lion* fired a single shot, which fell short. The enemy at this time were in single line ahead, with light-cruisers ahead and a large number of destroyers on their starboard beam.

Single shots were fired at intervals to test the range, and at

9.9 a.m. *Lion* made her first hit on the *Blücher*, No. 4 in the line. The *Tiger* opened fire at 9.20 a.m. on the rear ship, the *Lion* shifted to No. 3 in the line, at 18,000 yards, this ship being hit by several salvos. The enemy returned our fire at 9.14 a.m. *Princess Royal*, on coming into range, opened fire on *Blücher*, the range of the leading ship being 17,500 yards, at 9.35 a.m. *New Zealand* was within range of *Blücher*, which had dropped somewhat astern, and opened fire on her. *Princess Royal* shifted to the third ship in the line, inflicting considerable damage on her.

Our flotilla cruisers and destroyers had gradually dropped from a position broad on our beam to our port quarter, so as not to foul our range with their smoke; but the enemy's destroyers threatening attack, the *Meteor* and *M* Division passed ahead of us, Captain the Hon. H. Meade, D.S.O., handling this Division with conspicuous ability.

About 9.45 a.m. the situation was as follows: *Blücher*, the fourth in their line, already showed signs of having suffered severely from gun-fire; their leading ship and No. 3 were also on fire. *Lion* was engaging No. 1, *Princess Royal* No. 3, *New Zealand* No. 4, while the *Tiger*, who was second in our line, fired first at their No. 1, and when interfered with by smoke, at their No. 4.

The enemy's destroyers emitted vast columns of smoke to screen their battle-cruisers, and under cover of this the latter now appeared to have altered course to the northward to increase their distance, and certainly the rear ships hauled out on the port quarter of their leader, thereby increasing their distance from our line. The battle-cruisers, therefore, were ordered to form a line of bearing N.N.W., and proceed at their utmost speed.

Their destroyers then showed evident signs of an attempt to attack. *Lion* and *Tiger* opened fire on them, and caused them to retire and resume their original course.

The light cruisers maintained an excellent position on the port quarter of the enemy's line, enabling them to observe and keep touch, or attack any vessel that might fall out of the line.

At 10.48 a.m. the *Blücher*, which had dropped considerably astern of enemy's line, hauled out to port, steering north with a heavy list, on fire, and apparently in a defeated condition. I consequently ordered *Indomitable* to attack enemy breaking northward.

At 10.54 a.m. submarines were reported on the starboard bow, and I personally observed the wash of a periscope, two points on our starboard bow. Immediately turned to port.

At 11.3 a.m. an injury to the *Lion* being reported as incapable of immediate repair, I directed *Lion* to shape course N.W. At 11.20 a.m. I called the *Attack* alongside, shifting my flag to her at about 11.35 a.m. I proceeded at utmost speed to rejoin the Squadron, and met them at noon retiring N.N.W.

I boarded and hoisted my flag in *Princess Royal* at about 12.20 p.m., when Captain Brock acquainted me with what had occurred since the *Lion* fell out of the line, namely that *Blücher* had been sunk and that the enemy battle-cruisers had continued their course to the eastward in a considerably damaged condition. He also informed me that a Zeppelin and a seaplane had endeavoured to drop bombs on the vessels which went to the rescue of the survivors of *Blücher*.

The good seamanship of Lieut.-Commander Cyril Callaghan, H.M.S. *Attack*, in placing his vessel alongside the *Lion* and subsequently the *Princess Royal*, enabled the transfer of flag to be made in the shortest possible time.

At 2 p.m. I closed *Lion* and received a report that her star-board engine was giving trouble owing to priming, and at 3.38 p.m. I ordered *Indomitable* to take her in tow, which was accomplished by 5 p.m.

The greatest credit is due to the Captains of *Indomitable* and *Lion* for the seamanlike manner in which the *Lion* was taken in tow under difficult circumstances.

The excellent steaming of the ships engaged in the operation was a conspicuous feature.

I attach an appendix giving the names of various officers and men who specially distinguished themselves.

Where all did well it is difficult to single out officers and men for special mention, and as *Lion* and *Tiger* were the only ships hit by the enemy, the majority of those I mention belong to those ships.

I have the honour to be, Sir,

Your obedient servant,

(Signed) DAVID BEATTY,
Vice-Admiral.

OFFICERS.

Commander Charles A. Fountaine, H.M.S. *Lion*.

Lieutenant-Commander Evan C. Bunbury, H.M.S. *Lion*.

Lieutenant Frederick T. Peters, H.M.S. *Meteor*.

Lieutenant Charles M. R. Schwerdt, H.M.S. *Lion*.

Engineer-Commander Donald P. Green, H.M.S. *Lion*.

Engineer-Commander James L. Sands, H.M.S. *Southampton*.

Engineer-Commander Thomas H. Turner, H.M.S. *New Zealand*.

Engineer-Lieutenant-Commander George Preece, H.M.S. *Lion*.

Engineer-Lieutenant Albert Knothe, H.M.S. *Indomitable*.

Surgeon Probationer James A. Stirling, R.N.V.R., H.M.S. *Meteor*.

Mr. Joseph H. Burton, Gunner (T), H.M.S. *Lion*.

Chief Carpenter Frederick E. Dailey, H.M.S. *Lion*.

PETTY OFFICERS AND MEN.

- Petty Officer John William Kemmett, O.N. 186788, H.M.S. *Lion*.
Able Seaman Henry Davis, O.N. 184526, H.M.S. *Tiger*.
Able Seaman Hubert F. Griffin, O.N.J. 14160, H.M.S. *Princess Royal*.
Able Seaman Peter Stanley Livingstone, O.N. 234328, H.M.S. *Lion*.
Able Seaman Herbert Robison, O.N. 209112, H.M.S. *Tiger*.
Able Seaman George Henry le Seilleur, O.N. 156802, H.M.S. *Lion*.
Boy, 1st Class, Francis G. H. Bamford, O.N.J. 26598, H.M.S. *Tiger*.
Boy, 1st Class, Julius F. Rogers, O.N.J. 28329, H.M.S. *Tiger*.
Chief Engine-Room Artificer, 1st Class, Evan Richard Hughes, O.N. 268999, H.M.S. *Indomitable*.
Chief Engine-Room Artificer, 2nd Class, Wm. Beaty Dand, O.N. 270648, H.M.S. *New Zealand*.
Chief Engine-Room Artificer W. Gillespie, O.N. 270080, H.M.S. *Meteor*.
Mechanician Alexander James Cannon, O.N. 175440, H.M.S. *Lion*.
Mechanician Edward Charles Ephgrave, O.N. 288231, H.M.S. *Lion*.
Chief Stoker Patrick Callaghan, O.N. 278953, H.M.S. *Lion*.
Chief Stoker Alfred Wm. Ferris, O.N. 175824, H.M.S. *Lion*.
Chief Stoker John Ernest James, Portsmouth, O.N. 174232, H.M.S. *New Zealand*.
Chief Stoker William James, O.N. 153220 (R.F.R. Dev. A. 3422), H.M.S. *Indomitable*.
Chief Stoker James Keating, R.F.R., O.N. 165732, H.M.S. *Meteor*.
Stoker Petty Officer Michael Flood, R.F.R., O.N. 153418, H.M.S. *Meteor*.
Stoker Petty Officer Thomas Wm. Hardy, O.N. 292542, H.M.S. *Indomitable*.
Stoker Petty Officer Albert John Sims, O.N. 276502, H.M.S. *New Zealand*.
Stoker Petty Officer Samuel Westaway, R.F.R., O.N. 300938, H.M.S. *Meteor*.
Acting Leading Stoker John Blackburn, O.N.K. 4844, H.M.S. *Tiger*.
Stoker, 1st Class, Alan H. Bennet, O.N.K. 10700, H.M.S. *Tiger*.
Stoker, 2nd Class, Harold Turner, O.N.K. 22720, H.M.S. *Tiger*.
Leading Carpenter's Crew, Emmanuel Omega Bradley, O.N. 346621, H.M.S. *Lion*.

Leading Carpenter's Crew, Elisha Currie, O.N. 344851, H.M.S. *Lion*.

Sick Berth Attendant Charles S. Hutchinson, O.N.M. 3882, H.M.S. *Tiger*.

Chief Writer Samuel G. White, O.N. 340597, H.M.S. *Tiger*.

Third Writer Herbert C. Green, O.N.M. 8266, H.M.S. *Tiger*.

Officers' Steward, 3rd Class, Fred W. Kearley, O.N.L. 2716, H.M.S. *Tiger*.

CENTRAL CHANCERY OF THE ORDERS OF KNIGHTHOOD.

LORD CHAMBERLAIN'S OFFICE,
ST. JAMES'S PALACE,
March 3rd, 1915.

The King has been graciously pleased to give orders for the following appointment to the Most Honourable Order of the Bath, in recognition of the services of the undermentioned officer mentioned in the foregoing despatch.

To be an Additional Member of the Military Division of the Third Class or Companion.

Captain Osmond de Beauvoir Brock, A.D.C., Royal Navy.

ADMIRALTY, S.W.,
March 3rd, 1915.

The King has been graciously pleased to give orders for the following appointment to the Distinguished Service Order, and for the award of the Distinguished Service Cross, to the undermentioned officers in recognition of their services mentioned in the foregoing despatch:

To be Companion of the Distinguished Service Order.

Lieutenant Frederic Thornton Peters, Royal Navy.

To receive the Distinguished Service Cross.

Surgeon Probationer James Alexander Stirling, R.N.V.R.

Gunner (T) Joseph H. Burton.

Chief Carpenter Frederick E. Dailey.

The following promotion has been made:

Commander Charles Andrew Fountaine to be a Captain in His Majesty's Fleet, to date March 3rd, 1915.

The following awards have also been made:

To receive the Distinguished Service Medal.

Petty Officer John William Kemmett, O.N. 186788.

Able Seaman Henry Davis, O.N. 184526.

Able Seaman Hubert F. Griffin, O.N.J. 14160.
 Able Seaman Peter Stanley Livingstone, O.N. 234328.
 Able Seaman Herbert Robison, O.N. 209112.
 Able Seaman George Henry le Seilleur, O.N. 156802.
 Boy, 1st Class, Francis G. H. Bamford, O.N.J. 26598.
 Boy, 1st Class, Julius F. Rogers, O.N.J. 28329.
 Chief Engine-Room Artificer, 1st Class, Evan Richard Hughes,
 O.N. 268999.
 Chief Engine-Room Artificer, 2nd Class, Wm. Beaty Dandi
 O.N. 270648.
 Chief Engine-Room Artificer W. Gillespie, O.N. 270080.
 Mechanician Alexander James Cannon, O.N. 175440.
 Mechanician Edward Charles Ephgrave, O.N. 288231.
 Chief Stoker Patrick Callaghan, O.N. 278953.
 Chief Stoker Alfred Wm. Ferris, O.N. 175824.
 Chief Stoker John Ernest James, Portsmouth, O.N. 174232.
 Chief Stoker William James, O.N. 153220 (R.F.R. Dev. A. 3422).
 Chief Stoker James Keating, R.F.R., O.N. 165732.
 Stoker Petty Officer Michael Flood, R.F.R., O.N. 153418.
 Stoker Petty Officer Thomas Wm. Hardy, O.N. 292542.
 Stoker Petty Officer Albert John Sims, O.N. 276502.
 Stoker Petty Officer Samuel Westaway, R.F.R., O.N. 300938.
 Acting Leading Stoker John Blackburn, O.N.K. 4844.
 Stoker, 1st Class, Alan H. Bennet, O.N.K. 10700.
 Stoker, 2nd Class, Harold Turner, O.N.K. 22720.
 Leading Carpenter's Crew, Emmanuel Omega Bradley, O.N.
 346621.
 Leading Carpenter's Crew, Elisha Currie, O.N. 344851.
 Sick Berth Attendant Charles S. Hutchinson, O.N.M. 3882.
 Chief Writer Samuel G. White, O.N. 340597.
 Third Writer Herbert C. Green, O.N.M. 8266.
 Officers' Steward, 3rd Class, Fred W. Kearley, O.N.L. 2716.

OPERATIONS OFF THE BELGIAN COAST.

Between August 22nd and November 19th, 1915.

ADMIRALTY,
January 12th.

The following despatch has been received from Vice-Admiral Reginald H. S. Bacon, K.C.B., C.V.O., D.S.O., commanding the Dover Patrol, reporting the operations off the Belgian coast between August 22nd and November 19th, 1915 :

OFFICE OF VICE-ADMIRAL,
DOVER,
December 3rd.

SIR,—In the summer and autumn of this year circumstances enabled offensive operations to be undertaken from the sea at

certain points on the Belgian coast. It is unnecessary to enter into the reasons for the various operations or the exact objectives attacked, since these are well known to their Lordships.

In all cases great care has been taken to confine the fire of the guns to objectives of military or naval importance, so as to inflict the minimum of loss of life and distress on the civil population, the larger number of whom are our Allies. In order to carry this principle into effect, it has at times been necessary to modify and even postpone projected attacks. The results, therefore, have been effective rather than sensational.

ATTACK ON ZEEBRUGGE.

On the evening of August 22nd I sailed with H.M. Ships *Sir John Moore* (Commander S. R. Miller, R.N.), *Lord Clive* (Commander N. H. Carter, R.N.), *Prince Rupert* (Commander H. O. Reinold, R.N.), and seventy-six other vessels and auxiliaries, and on the following morning attacked the harbour and defences of Zeebrugge. The results were markedly successful; all the objectives selected were damaged or destroyed.

It was satisfactory that extreme accuracy was obtained with the gun fire at the long ranges necessary for the best attack of such defences. This accuracy fully justifies the novel methods used and the careful training in attention to details to which the vessels are subjected. A similar organisation was employed in subsequent attacks.

On September 6th I attacked Ostende with five monitors, including *General Craufurd* (Commander E. Altham, R.N.) and *M-25* (Lieutenant-Commander B. H. Ramsay, R.N.), and damage was done to submarine workshops and harbour works. The enemy returned our fire with heavy guns of calibre probably larger than our own, and with considerable accuracy. Again the shooting on the part of our vessels was remarkably good, and the assistance rendered by the Auxiliary Craft most valuable.

On the same day Westende was subjected to attack by H.M. Ships *Redoubtable* (Captain V. B. Molteno, R.N.), *Bustard* (Lieutenant O. H. K. Maguire, R.N.), and *Excellent* (Commander G. L. Saurin, R.N.), under the direction of Captain V. B. Molteno, and with results that reflected credit on all concerned.

On September 19th, with several of the vessels, including H.M.S. *Marshal Ney* (Captain H. J. Tweedie, R.N.), I carried out an attack against certain defences in the neighbourhood of Middlekirke, Raversyde, and Westende, which resulted in damaging and silencing the batteries. Valuable co-operation was received from the French batteries in the vicinity of Nieuport.

On the evening of September 24th, I dispatched H.M.S. *Prince Eugene* (Captain E. Wigram, R.N.) and one other monitor and the requisite auxiliary craft to bombard the following morning the

coast of Knocke, Heyst, Zeebrugge, and Blankenberghe (east of Ostende), while with the other vessels, including H.M.S. *Lord Clive* (Commander G. R. B. Blount, R.N.) on the same day I carried out an attack on the fortified positions west of that place. Again, during these attacks, considerable damage was done.

On September 26th, 27th, and 30th I made further attacks on the various batteries and strong positions at Middlekirke and Westende.

ALARM ON THE COAST.

On the evening of October 2nd I sailed with four monitors, and again attacked with satisfactory results the batteries at Zeebrugge on the morning of the 3rd. The whole coast during our passage was showing signs of considerable alarm and unrest as a result of the previous operations. Our advanced vessels were attacked by submarine boats, but without result.

On October 6th, 12th, 13th, and 18th, and November 16th-19th, other batteries or positions of military value have been attacked by the vessels under my command.

Up to the present, therefore, concerted operations of considerable magnitude have been carried out on six occasions, and on eight other days attacks on a smaller scale on fortified positions have taken place. The accuracy of the enemy's fire has been good.

The damage inflicted on the enemy is known to include the sinking of one torpedo-boat, two submarines, and one large dredger, the total destruction of three military factories, and damage to a fourth, extensive damage to the locks at Zeebrugge, and the destruction of 13 guns of considerable calibre, in addition to the destruction of two ammunition depots and several military storehouses, observation stations, and signalling posts, damage to wharves, moles, and other secondary places. Further, a considerable number of casualties are known to have been suffered by the enemy.

THREE VESSELS LOST.

I regret that three vessels were lost during the operations: H.M. Armed Yacht *Sanda*, sunk by gunfire; H.M. Drifter *Great Heart*, sunk by mine; and H.M. Mine Sweeper *Brighton Queen*, sunk by mine.

Our total casualties numbered thirty-four killed and twenty-four wounded, which, considering the dangers to which the vessels were exposed by gunfire, aircraft, submarine boats, and mines on an enemy's coast, may be looked upon as comparatively small in proportion to the number of officers and men taking part in the operations.

It is with regret that, among others, I have to report the death of Lieutenant-Commander H. T. Gartside-Tipping, R.N., of the Armed Yacht *Sanda*, who was the oldest naval officer afloat. In spite of his advanced age, he rejoined, and with undemonstrative patriotism served at sea as a Lieutenant-Commander.

I cannot speak too highly of the manner in which the officers and men under my command have carried out the duties allotted to them. The work has been varied, and to a great extent novel, but in all particulars it has been entered into with zeal and enthusiasm which could not have been surpassed. The gunnery results have exceeded my expectations.

SEA ADAPTABILITY.

Their Lordships will appreciate the difficulties attendant on the cruising in company by day and night under war conditions of a fleet of eighty vessels comprising several widely different classes, manned partly by trained naval ratings but more largely by officers of the Naval Reserve, whose fleet training has necessarily been scant, and by men whose work in life has hitherto been that of deep-sea fishermen.

The protection of such a moving fleet by the destroyers in waters which are the natural homes of the enemy's submarines has been admirable, and justifies the training and organisation of the personnel of the flotilla. But more remarkable still, in my opinion, is the aptitude shown by the officers and crews of the drifters and trawlers, who in difficult waters, under conditions totally strange to them, have maintained their allotted stations without a single accident. Moreover, these men under fire have exhibited a coolness well worthy of the personnel of a service inured by discipline. The results show how deeply sea adaptability is ingrained in the sea-faring race of these islands.

It is to the excellent work done by the destroyers under Commodore C. D. Johnson, M.V.O., and the drifters under Captain F. G. Bird, that I ascribe our immunity from loss by submarine attack. The mine-sweepers, under Commander W. G. Rigg, R.N., have indefatigably carried out their dangerous duties.

Throughout these operations attacks have been made on our vessels by the enemy's aircraft, but latterly the vigilance of our Dunkirk Aerodrome, under Wing-Commander A. M. Longmore, has considerably curtailed their activity.

I wish specially to mention the cordial assistance always tendered to me by Vice-Admiral Favereau, Commanding the French Second Light Cruiser Squadron, whose patrol vessels under Commander Saillard have assisted to protect our ships from submarine dangers. In doing this, I regret to say, their patrols have lost three vessels and several gallant lives.

I would also bring to their Lordships' attention the great assistance rendered to me by Brigadier-General T. Bridges, C.B., attached to the Belgian Mission.

Captain H. W. Bowring, throughout these operations, has acted most ably as my Chief of the Staff.

I have the honour to be, Sir,

Your obedient servant,

R. H. BACON,
Vice-Admiral, Dover Patrol.

The Secretary of the Admiralty.

RECOMMENDATIONS.

Officers specially recommended :

Commodore C. D. Johnson, M.V.O., 6th Flotilla. In command of the Destroyer Flotilla, and has performed much valuable work during the whole of the operations, and directly responsible for the efficiency with which the patrol was conducted.

Captain E. Wigram, H.M.S. *Prince Eugene*. Commanded the detached squadron during a successful attack on Zeebrugge on September 6th, which caused considerable loss and inconvenience to the enemy.

Captain F. G. Bird, Dover Drifter Patrol. In personal charge of the drifters during five of the major attacks, and contributed materially to the success of the operations.

Flag Captain H. W. Bowring, Dover Patrol. Acted as Chief of my Staff during all the operations, and afforded me most valuable assistance.

Commander W. G. H. Bickford, Dover Patrol. In charge of the forward observation party under the close fire of the batteries during two attacks, and largely assisted in correcting the fire of the guns.

Mr. L. Scarlett, Skipper, R.N.R., H.M. Drifter *Hyacinth*. On September 25th, off Zeebrugge, exhibited great coolness in action, remaining and completing his task though exposed to heavy gun fire.

Lieutenant L. F. Robinson, H.M.S. *Lord Clive*. Gunnery Lieutenant of *Lord Clive*, the excellent shooting of which ship has contributed materially to the damage done.

PART III.

Tables of Warship Losses.

THE following Tables attempt to bring together as accurate and complete a list as possible of the authentic warship losses sustained by the belligerent Navies during the war.

It is not claimed that they include every warship sunk or every detail surrounding losses already known. Complete Tables will only be prepared six or twelve months after the conclusion of hostilities, when all losses will become known.

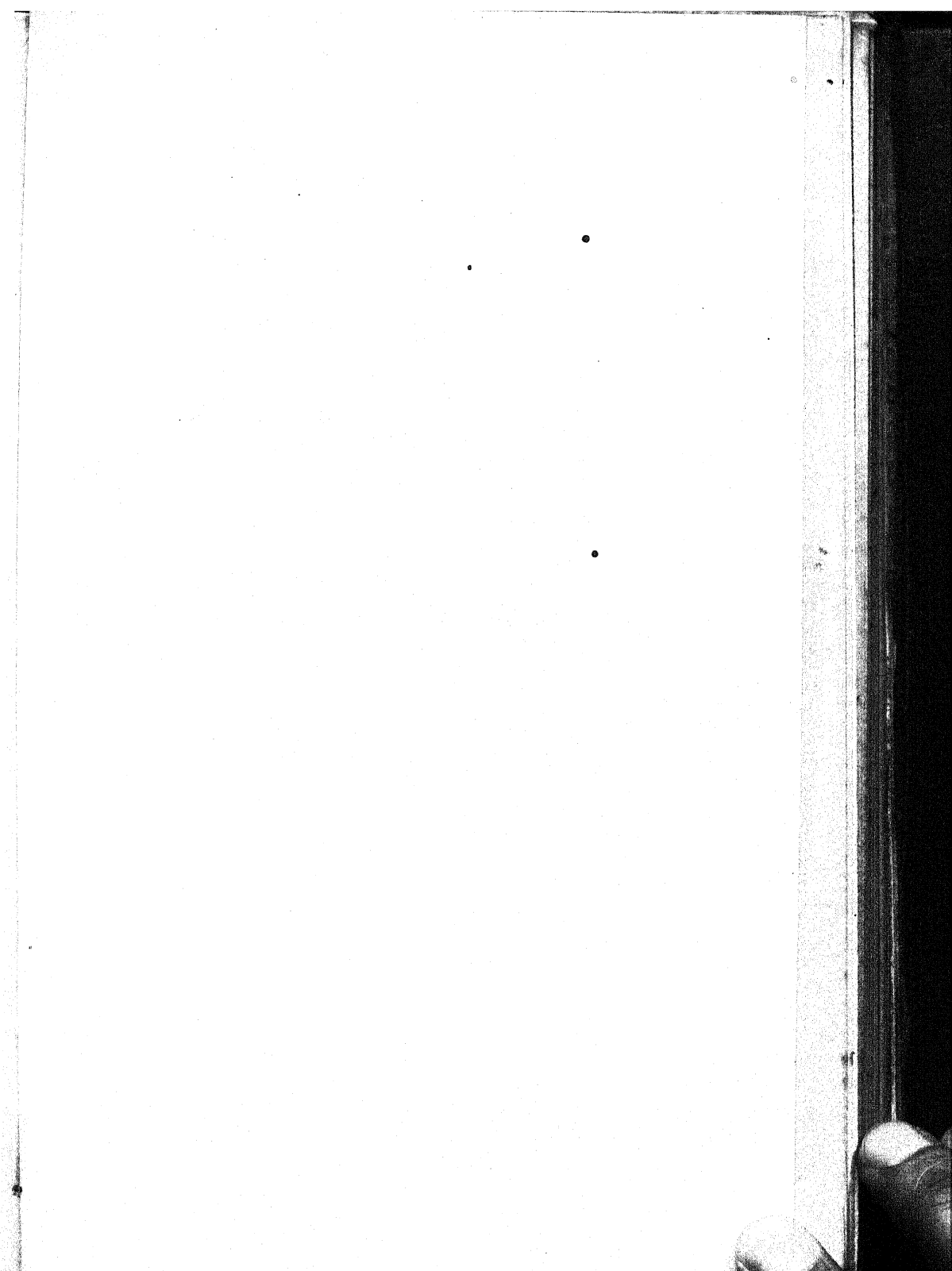
Much valuable information regarding German mercantile vessels used for war purposes has been taken, by permission, from the list *Prizes of War* issued by Lloyds.

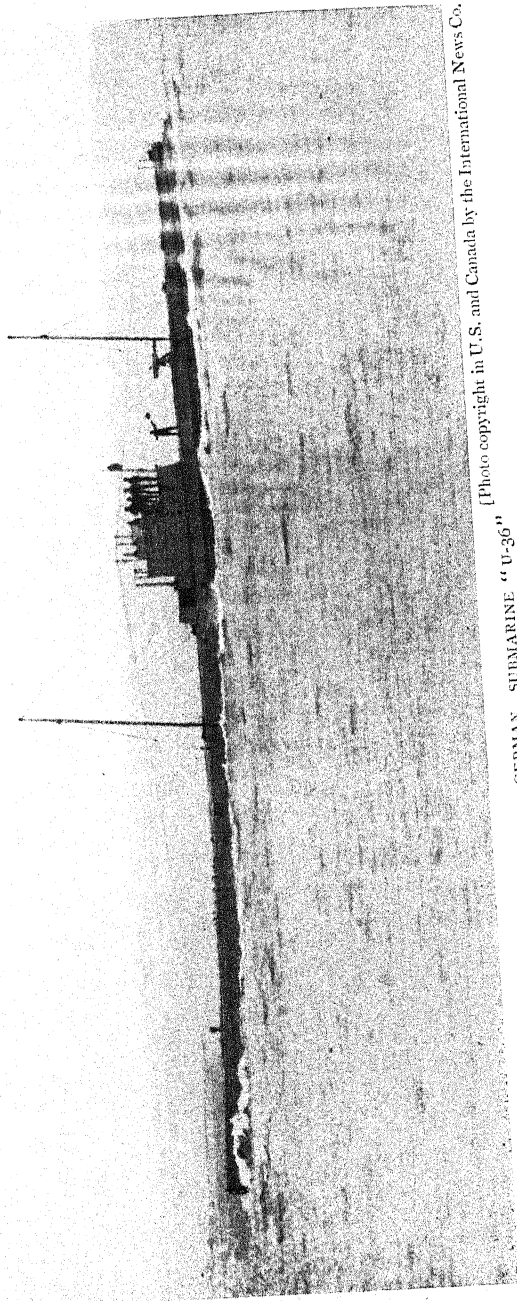
If any further information can be contributed to bring the Tables up to a greater standard of accuracy in future Editions of THE NAVY LEAGUE ANNUAL, it will be greatly appreciated by the compiler of the Tables, if sent to him through the Secretary of the Navy League.

ADDENDA TO TABLES OF WARSHIP LOSSES TO FEBRUARY 4TH, 1916

Great Britain.—An unidentified British submarine was wrecked on the Dutch Coast on Jan. 20th, 1916.

Italy.—An official despatch by H.R.H. the Duke of Aosta (commanding the Third Italian Fleet), dated Dec. 30th, 1915, contained a list of posthumous honours conferred on 20 officers and men of an Italian submarine who lost their lives in an attempt to attack an Austrian submarine at close range off Pelagosa Island (Adriatic) on Aug. 5th, 1915. The Italian submarine referred to is evidently the *Nereide*, and her loss may now be accepted as definite.





GERMAN SUBMARINE "U-36"
[Photo copyright in U. S. and Canada by the International News Co.]

Tables of Warship Losses.

(Corrected to Jan. 19th, 1916.)

I.

THE ALLIED NAVIES.

A.—BRITISH NAVY.

Battleships :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
King Edward VII	'03	16,350	4-12 in. 4-9-2 in. 10-6 in.	Severely damaged by mine and sunk in the North Sea; loss announced, Jan. 9th, 1916. Exact date not known.
Triumph	'03	11,985	4-10 in. 14-7-5 in.	Torpedoed off Gallipoli Peninsula by unknown German submarine, May 25th, 1915.
Bulwark	'99	15,000	4-12 in. 12-6 in.	Destroyed by internal explosions in Sheerness Harbour, Nov. 25th, 1914.
Formidable	'98	"	"	Torpedoed in the Channel by an unknown German submarine, Jan. 1st, 1915.
Irresistible	"	"	"	Mined off Eren-Kioi in the Dardanelles, March 18th, 1915.
Ocean	"	12,950	"	Mined off Eren-Kioi in the Dardanelles, March 18th, 1915.
Goliath	"	"	"	Torpedoed by Turkish destroyers of <i>Mowanets-i-Millet</i> type in the Dardanelles, May 12th, 1915.
Majestic	'95	14,900	"	Torpedoed off Gallipoli Peninsula (Cape Helles) by unknown German submarine, May 27th, 1915.

Armoured Cruisers :

Name. •	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Natal	'05	13,550	6-9.2 in. 4-7.5 in.	Destroyed by internal explosions in harbour, Dec. 30th, 1915. (Exact locality not known.)
Argyll	'04	10,850	4-7.5 in. 6-6 in.	Wrecked on East Scottish Coast on night of Oct. 26th to 27th, 1915.
Good Hope	'01	14,100	4-9.2 in. 16-6 in.	Sunk off Coronel, Chilian Coast, by gun-fire of the German armoured cruisers <i>Scharnhorst</i> and <i>Gneisenau</i> , Nov. 1st, 1914.
Monmouth	'01	9,800	14-6 in.	Sunk off Coronel, Chilian Coast, by gun-fire of the German armoured cruisers <i>Scharnhorst</i> and <i>Gneisenau</i> , Nov. 1st, 1914.
Aboukir Hogue Cressy	'00 '99	12,000	{ 4-9.2 in. 12-6 in.	{ All three armoured cruisers sunk off the Hook of Holland by German submarine <i>U-9</i> , Sept. 22nd, 1914.
Hawke	'91			
		7,350	2-9.2 in. 10-6 in.	Torpedoed while on patrol duty off East Scottish Coast by German submarine <i>U-9</i> , Oct. 15th, 1914.

Light Cruisers :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Amphion	'11	3,440	10-4 in.	Mined off mouth of the Thames by mine laid by German mercantile mine-layer <i>Königin Luise</i> , Aug. 5th, 1914.
Pathfinder	'04	2,940	9-4 in.	Torpedoed off St. Abbs' Head (East Scottish Coast) by German submarine <i>U-21</i> , Sept. 5th, 1914.
Hermes	'98	5,600	11-6 in.	Torpedoed off Dover by an unknown German submarine, Oct. 31st, 1914.
Pegasus	'97	2,200	8-4 in.	Driven ashore after being disabled by gun-fire of German light cruiser <i>Königsberg</i> at Zanzibar, Sept. 20th, 1914.

Torpedo-Craft—Torpedo-gunboats (T.G.), Destroyers (D), Torpedo-boats (T.B.), and Submarines (S.):

Name or Number.	Date.	Displ. (Tons).	Guns and Tubes (T.).	Cause, locality, and date of loss.
Speedy (T.G.)	'93	810	2-4.7 in. 3-18 in. T.	Mined in the North Sea, Sept. 3rd, 1914.
Niger (T.G.)	'92	"	"	Torpedoed off Deal by unknown German submarine, Nov. 11th, 1914.
Louis (D.)	'14	965	3-4 in. 4-21 in. T.	Wrecked on Turkish Coast in Aegean Sea, Nov. 10th, 1915.
Lynx (D.)	'13	935	3-4 in. 2-21 in. T.	Mined in the North Sea, Aug. 9th, 1915.
Maori (D.)	'09	1,035	2-4 in. 2-18 in. T.	Mined off the Belgian Coast, May 7th, 1915.
Erne (D.)	'03	550	4-12 pr. 2-18 in. T.	Wrecked on East Scottish or British Coast, about Feb. 6th, 1915.
Recruit (D.)	'96	385	1-12 pr. 5-6 pr. 2-18 in. T.	Torpedoed in the North Sea near the Galloper Lightship by an unknown German submarine, May 1st, 1915.
No. 12 (T.B.)	'06	172	2-12 pr. 2-18 in. T.	{ Both torpedo-boats torpedoed in the North Sea by an unknown German submarine, June 10th, 1915.
No. 10 (T.B.)	"	166	"	
No. 96 (T.B.)	'94	140	2-3 pr. 3-14 in. T.	
"E-20" (S.)	?	?	?	Sunk in the Straits of Gibraltar from collision with an unknown British auxiliary mercantile cruiser, Nov. 1st, 1915.
E-17 (S.) (a)	?	?	?	Netted and captured in the Dardanelles or Sea of Marmora, Nov. 5th, 1915.
E-17 (S.) (b)	'14	725 810	2-12 pr. 4-21 in. T.	Disabled and sunk off the Texel, Jan. 6th, 1916.
E-15 (S.)	"	"	"	Missing.*
E-13 (S.)	"	"	"	Stranded near Kephez Point in the Dardanelles, and torpedoed by picket-boats of H.M. ships <i>Triumph</i> and <i>Majestic</i> , April 18th, 1915.
E-10 (S.)	"	"	"	Stranded on Saltholm Island, near Copenhagen, attacked and severely damaged by gun-fire of German torpedo-craft, Aug. 8th, 1915. (Salved and interned at Copenhagen.)
E-7 (S.)	'13	"	"	Missing.*
				Sunk or captured in the Sea of Marmora or Dardanelles, Sept. 8th, 1915.

Torpedo-Craft (*continued*) :

Name or Number.	Date.	Displ. (Tons).	Guns and Tubes (T.).	Cause, locality, and date of loss.
E-3 (S.)	'12	725 810	2-12 pr. 4-21 in. T.	Sunk by German destroyers near Heligoland, Oct. 18th, 1914.
D-5 (S.)	'11	550 600	? guns 3-18 in. T.	Mined off Yarmouth by mine thrown out by German war-ship, Nov. 3rd, 1914.
D-2 (S.)	"	"	"	Missing.*
AE-2 (S.) †	'13	725 810	2-12 pr. 4-21 in. T.	Destroyed or captured in the Sea of Marmora or the Dardanelles, April 31st, 1915.
AE-1 (S.) †	"	"	"	Believed to have accidentally foundered in the Pacific about Sept. 14th, 1914.

* E-17 (b), E-10, and D-2 as given by Tables of War Losses published in *The Naval and Military Record*.

† AE-1 and AE-2 belonged to the Australian Fleet Unit.

Armed Mercantile Cruisers, Auxiliaries, Mine-Sweepers, Patrol Craft, etc. :

Name.	Cause, locality, and date of loss.
Oceanic	Wrecked near Wick, N.B., Sept. 8th, 1914.
Princess Irene	Destroyed by internal explosion in Sheerness Harbour, May 27th, 1915.
Glan McNaughton	Destroyed while on patrol duty, Feb. 3rd, 1915 (locality and cause of loss not known).
Bayano	Torpedoed in the Irish Sea by an unknown German submarine, March 11th, 1915.
Viknor	Mined or wrecked on North Irish Coast, March 11th, 1915.
India	Torpedoed and sunk off north-western Norwegian Coast by an unknown German submarine, Aug. 8th, 1915.
Ramsey	Sunk by gun-fire of the armed German mercantile mine-layer <i>Meteor</i> in the North Sea, Aug. 8th, 1915.
Hythe	Sunk by collision in the Ægean Sea, Oct. 29th, 1915.
Tara	Sunk by gun-fire of two unknown German submarines in the Eastern Mediterranean, Nov. 5th, 1915.
Princess Beatrice	} Sunk, Oct. 5th, 1914 { Trawlers: locality and cause of loss not known.
Drum oak	
Mary	
Columbia	
	Sunk by German vedette boats A-2 and A-6 in the North Sea, May 2nd, 1915.

Armed Mercantile Cruisers, etc. (continued) :

Name.	Cause, locality, and date of loss.
Sanda*	Armed yacht sunk by gun-fire of German coastal batteries off the Belgian Coast. Exact date not known.
Great Heart*	Drifter sunk by mine off the Belgian Coast. Exact date not known.
Brighton Queen*	Mine-sweeper sunk by mine off the Belgian coast. Exact date not known.
<i>And Others</i>	Armed trawlers, drifters, and yachts, patrol vessels, mine-sweepers, and other smaller craft requisitioned for war duties lost by mines, stranding, and other causes. Causes, localities, and dates of losses not published.

* These three vessels were sunk, between Aug. 22nd and Nov. 19th, 1915, while operating with the Dover Patrol.

EGYPT.

Coastguard Vessels :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Abdel Monaym	'02	598	2-3 pr.	{ Both vessels sunk by gun-fire of two unknown German submarines in Eastern Mediterranean, Nov. 5th, 1915.
Abbas	'84	298	„	

B.—FRENCH NAVY.**Battleship :**

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Bouvet	'96	12,007	2-12 in. 2-10·8 in. 8-5·5 in.	Mined or destroyed by explosion of magazines off Eren-Kioi in the Dardanelles, March 18th, 1915.

Armoured Cruiser :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Leon Gambetta	'01	12,352	4-7·6 in. 16-6·4 in.	Torpedoed in the Straits of Otranto by Austrian submarine <i>U-5</i> , on the night of April 26th-27th, 1915.

TABLES OF WARSHIP LOSSES

Torpedo-Craft—Torpedo-gunboats (T.G.), Destroyers (D.), Torpedo-boats (T.B.), and Submarines (S.).:

Name.	Date.	Displ. (Tons).	Guns and Tubes (T.).	Cause, locality, and date of loss.
Casabianca* (T.G.) <i>Mine-layer</i>	'95	1,045	1-3·9 in.	Destroyed by premature explosion of own mines near Smyrna on the night of June 3rd-4th, 1915.
Zélée † (T.G.)	'99	636	Nil	Sunk by gun-fire of German armoured cruisers <i>Scharnhorst</i> and <i>Gneisenau</i> at Pa-peete (Tahiti), Sept. 22nd, 1914.
Dague (D.)	'10	730	2-3·9 in. 4-9 pr. 4-18 in. T.	Either torpedoed by an unknown Austrian submarine or mined off Antivari, Feb. 24th, 1915.
Branlebas (D.) *	'07	330	1-9 pr. 6-3 pr. 2-18 in. T.	Mined at night off the Belgian Coast, exact date of loss not known, but probably in Nov. 1915.
Mousquet (D.)	'01	310	1-9 pr. 6-3 pr. 2-15 in. T.	Sunk by gun-fire of German light cruiser <i>Emden</i> , near Penang, Oct. 28th, 1914.
No. 338 (T.B.)	'06	97	{ 2-1 pr. 3-15 in. T. }	Both torpedo-boats sunk by collision off Toulon, Oct. 9th, 1914.
No. 347 (T.B.)				
No. 219 (T.B.)				
Mariotte (S.)	'11	522 615	6 Tubes	Sunk off Nieuport about the end of January 1915. (Exact cause and date not known.) Sunk or captured in the Dardanelles or Sea of Marmora, July 26th, 1915.
Joule (S.)	"	392 550	7 Tubes	Sunk by mine in the Dardanelles, May 1st, 1915.
Curie (S.)	"	"	"	Netted and captured by the Austrians at Pola, Dec. 28th, 1914.
Fresnel (S.)	"	"	"	Stranded at mouth of Bojano River (10 miles north of San Giovanni di Medusa, Adriatic) and destroyed by gun-fire of the Austrian destroyer <i>Varasdinier</i> , Dec. 6th, 1915.
Monge	'08	"	"	Destroyed off Cattaro by Austrian light cruiser <i>Helgoland</i> and destroyers of the <i>Balaton</i> class on the night of Dec. 28-29th, 1915.
Saphir (S.)	"	386 450	6 Tubes	Wrecked in diving to avoid mines near Pola or Fiume, Jan. 17th, 1915.

Torpedo-Craft (continued) :

Name.	Date.	Displ. (Tons).	Guns and Tubes (T.).	Cause, locality, and date of loss.
Turquoise (S.)	'08	<u>386</u> 450	6 Tubes	Disabled by gun-fire and captured in the Sea of Marmora, Nov. , 1915.†
<i>And Others</i>	—	—	—	Missing.

* *Casabianca's* displacement is approximate after conversion to mine-layer.

† *Zélie* was disarmed at time of loss.

‡ Since reported to have foundered with Turkish crew.

Armed Mercantile Cruisers and other Auxiliaries :

Name.	Cause, locality, and date of loss.
Carthage	Torpedoed off Gallipoli Peninsula by an unknown German submarine about June 1915.
Indien	Torpedoed in Ægean Sea by an unknown German submarine, Aug. 8th, 1915.
La France (IV ?)	Torpedoed in Western Mediterranean by an unknown German submarine early in Nov. 1915.
<i>And Others*</i>	Armed patrol-craft, yachts, mine-sweepers, etc., and other smaller craft requisitioned for war service lost by submarine attacks, mines, stranding, and other causes. Localities and dates of losses not available.

* Three unidentified patrol craft were lost while assisting the British Dover Patrol in operations off the Belgian Coast between Aug. 22nd and Nov. 19th, 1915.

C.—ITALIAN NAVY.**Battleship :**

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Benedetto Brin	'01	13,215	4-12 in. 4-8 in. 12-6 in.	Destroyed by internal explosion in Brindisi Harbour, Sept. 29th, 1915.

Armoured Cruisers :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Amalfi	'08	9,958	4-10 in. 4-7·5 in.	Sunk by an unknown Austrian submarine in the Adriatic Sea, July 7th, 1915.
Giuseppe Garibaldi	'99	7,234	1-10 in. 2-8 in. 14-6 in.	Sunk by an unknown Austrian submarine off the Dalmatian Coast, July 19th, 1915.

Light Cruisers.—Nil.

Torpedo-Craft—Destroyers (D.) and Submarines (S.) :

Name.	Date.	Displ. (Tons).	Guns and Tubes (T.).	Cause, locality, and date of loss.
Intrepido (D.)	'12	680	1-4·7 in. 4-12 pr. 2 tubes	Mined in Straits of Otranto or off Albanian Coast about the end of Nov. or early in Dec. 1915. (Exact locality and date of loss not known.)
Turbine (D.)	'01	325	5-6 pr. 4-18 in. T.	Sunk by gun-fire of an Austrian light cruiser of <i>Admiral Spaun</i> type and Austrian destroyers of <i>Huszar</i> type in the Adriatic Sea, May 24th, 1915.
Nereide * (?) (S.)	'13	221 315	2 tubes	Missing. Believed to have foundered accidentally off Pelagosa Island in the Adriatic Sea early in August 1915.
Medusa (S.)	'11	241 295	„	Torpedoed by an unknown Austrian submarine in the Adriatic Sea, June 15th, 1915.

* *Nereide* was admitted by the Italian Ministry of Marine to be "missing" and overdue at her base. The presumed cause of loss was given as above. But by accounts in neutral naval papers, *Nereide* subsequently returned to port seriously damaged by a mine, or through having been torpedoed by an unknown Austrian submarine. Her commanding officer and three men were reported to have been killed by the explosion. *Nereide's* loss need not be accepted as definite pending further information.

Armed Mercantile Cruisers and other requisitioned War Auxiliaries :

Name.	Cause, locality, and date of loss.
Citta di Palermo	Sunk by mine in Lower Adriatic, Jan. 8th, 1916. (Armed with 2-4·7 in. and 6-12 pr. Q.F. guns.)
Brindisi	Sunk by mine in Lower Adriatic, Jan. 6th, 1916.
And others	Small vessels requisitioned for war duties, sunk by mines and other causes in the Adriatic. Exact dates and other details not available.

D.—JAPANESE NAVY.

(All losses incurred in attacks on Kiao-Chau, 1914.)

Battleships.—Nil.**Armoured Cruiser (old).**

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Takachiho	'85	3,700	8-6 in.	Torpedoed by German destroyer <i>S-90</i> , off Tsing-tao, Oct. 17th, 1914.

Torpedo-Craft (Destroyer and Torpedo-boat).

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Shirotaye	'06	380	6-12 pr. 2-18 in. T.	Wrecked in Kiao-Chau Bay, Sept. 4th, 1914.
No. 33	'99	82	1-3 pr. 3 tubes	Mined in Kiao-Chau Bay, Nov. 11th, 1914.

E.—RUSSIAN NAVY.**Battleships.**—Nil.**Armoured Cruiser.**

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Pallada	'06	7,775	2-8 in. 8-6 in.	Torpedoed in the Gulf of Finland by the German submarine <i>U-26</i> , Oct. 11th, 1914.

Light Cruiser.

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Jemtechug	'03	3,130	8-4.7 in.	Sunk by gun-fire and torpedoes of German light cruiser <i>Emden</i> in Penang Harbour, Oct. 28th, 1914.

Gunboats.

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Donetz Kubanetz	'87	1,200	{ 2-6 in. 1-4.7 in. 2-12 pr. }	Both gunboats scuttled or torpedoed at Odessa in the Black Sea, Oct. 29th, 1914.
Sivoutch	'07	875	2-4.7 in. 4-12 pr.	Sunk in Gulf of Riga by gun-fire of a German light cruiser and torpedoes of German destroyers, Aug. 19th, 1915.

Torpedo-craft.—Destroyers, torpedo-boats, and submarines.

No losses in these types have been officially announced, but some have certainly taken place.

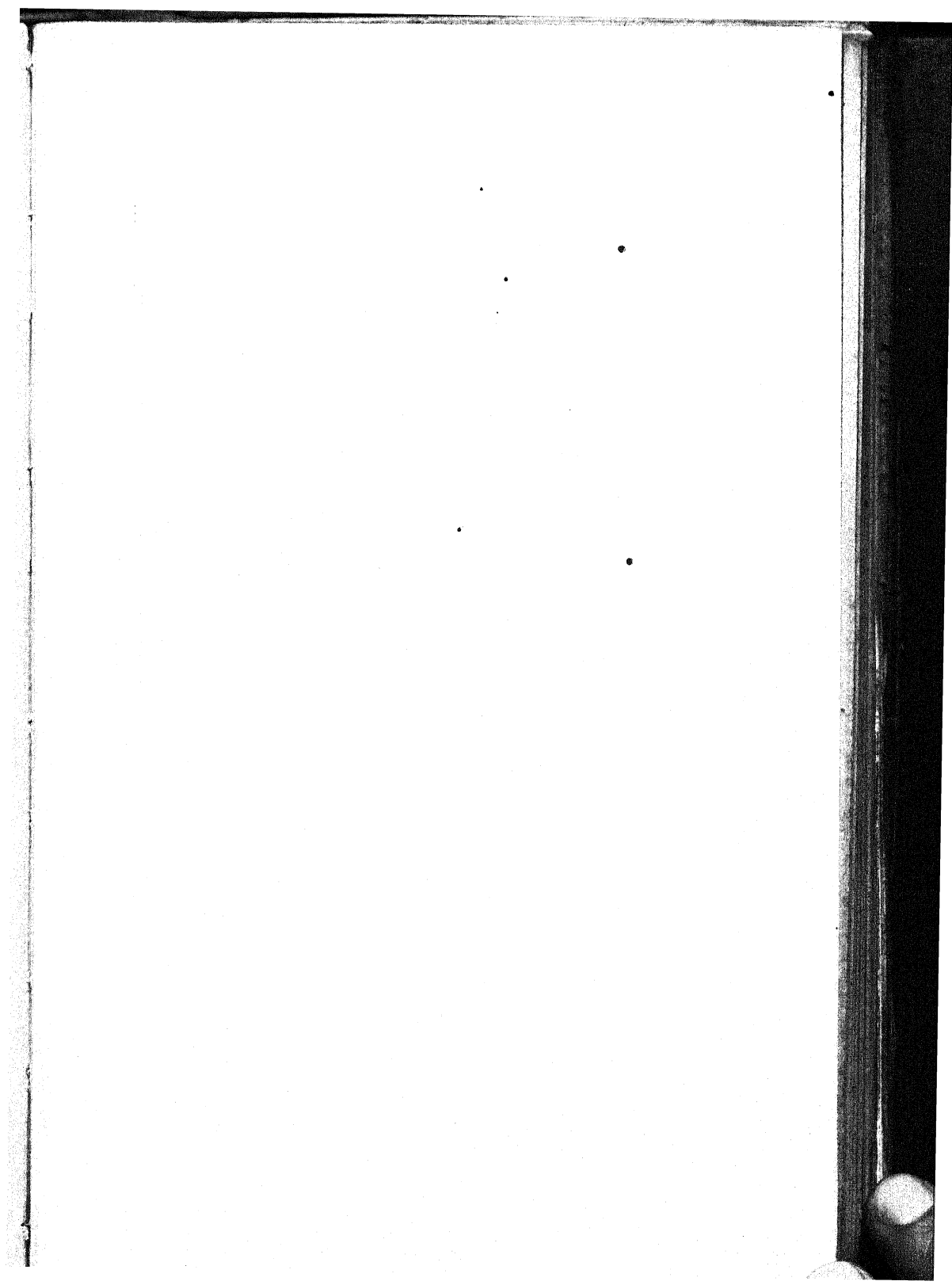
Auxiliaries.—*Mine-layers.*

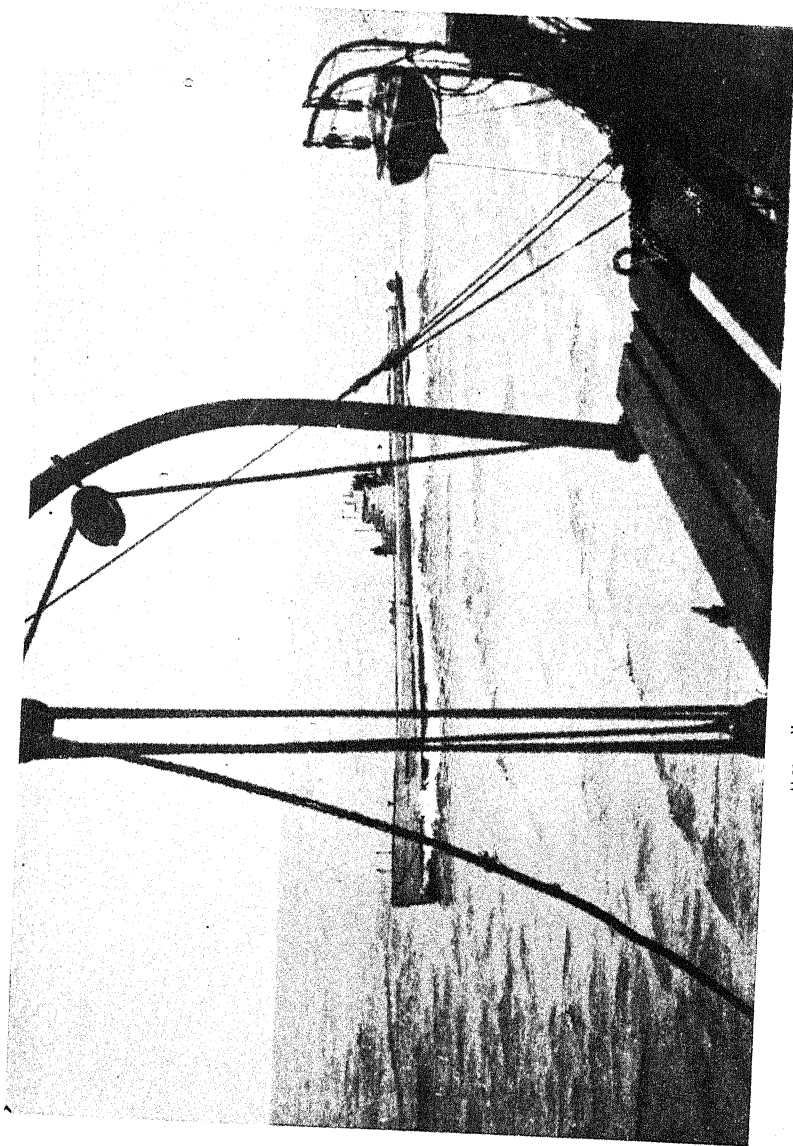
Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Yenessi	'06	2,926	1-4.7 in. 11-12 pr. 360 mines	Torpedoed off Courlandian Coast by an unknown German submarine, June 6th, 1915.
Prut	'79	4,921	8-3 pr.	Scuttled at Odessa to avoid capture, Oct. 29th, 1914.

Some minor craft, requisitioned for war service, have been lost in the Baltic and Black Sea by mines and other causes. No details available.

BELGIUM.

At the outbreak of war, there were about a dozen Belgian steamers belonging to the Bureau of Marine. It is not known if any of these were scuttled or destroyed on the evacuation of Antwerp, 1914.





"U-29" ATTACKING THE S.S. "HEADLANDS"

[Daily Mail Photo]

II.

THE ENEMY NAVIES.

F.—GERMANY.

Battleships :

A battleship of the *Deutschland* class (identified as the *Pommern*) was reported to have been torpedoed in the Gulf of Danzig on July 2nd, 1915, by an unknown British submarine. Loss, however, is not definitely certain.

There are good grounds for believing that the German battle-cruiser *von der Tann* was sunk on or about Dec. 16th, 1914.

Armoured Cruisers :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Blücher	'08	15,550	12-8-2 in. 8-5-9 in.	Sunk by the gun-fire and torpedoes of British battle-cruisers, light cruisers, and destroyers near the Dogger Bank, Jan. 24th, 1915.
Scharnhorst	'06	11,420	{ 8-8-2 in. 6-5-9 in.	{ Both armoured cruisers sunk by the gun-fire of the British battle-cruisers <i>Invincible</i> and <i>Inflexible</i> near the Falkland Islands, Dec. 8th, 1914.
Gneisenau				
Yorck	'04	9,350	4-8-2 in. 10-5-9 in.	Mined by German mine in Jahde Bay, Nov. 4th, 1914.
Friedrich Karl	'01	8,858	"	Mined by German or Russian mine in the Baltic, Dec. 12th, 1914.
Prinz Adalbert	"	"	"	Torpedoed in the Baltic by an unknown British submarine, Oct. 23rd, 1915.

Light Cruisers :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Karlsruhe	'13	4,822	12-4-1 in.	Believed to have been destroyed by internal explosion in the Caribbean Sea about the end of Oct. or early in Nov. 1914.
Magdeburg	'11	4,478	"	Stranded on Aland Islands in the Baltic and destroyed by gun-fire of Russian cruisers, Aug. 28th, 1914.
Köln	'09	4,280	"	Both light cruisers sunk by the gun-fire of British light cruisers in the Bight of Heligoland, Aug. 28th, 1914.
Mainz	"	"	"	
Emden *	'08	3,598	10-4-1 in.	Beached and surrendered after total disablement by gun-fire of Australian light cruiser <i>Sydney</i> at the Keelings (Cocos) Islands, Indian Ocean, Nov. 10th, 1914.
Dresden	"	"	"	Scuttled at Juan Fernandez Island off the Chilian Coast, March 15th, 1915.
Nürnberg	'06	3,396	"	Sunk by gun-fire of the British armoured cruiser <i>Kent</i> near the Falkland Islands, Dec. 8th, 1914.
Königsberg	'05	3,348	"	Blocked in the Rufidji River (German East Africa) by British light cruiser <i>Chatham</i> , Oct. 30th, 1914; destroyed by British monitors <i>Severn</i> and <i>Mersey</i> , July 6th and 11th, 1915.
Leipzig	"	3,200	"	Sunk by gun-fire of British armoured cruiser <i>Cornwall</i> and light cruiser <i>Glasgow</i> near the Falkland Islands, Dec. 8th, 1915.
Bremen	'03	"	"	Torpedoed in the Baltic by an unknown British or Russian submarine Dec. 17th, 1915.
Undine	'02	2,672	"	Torpedoed in the Baltic by an unknown British submarine, Nov. 7th, 1915.
Ariadne	'00	2,618	"	Set on fire and sunk by gun-fire of British battle-cruiser <i>Lion</i> in the Bight of Heligoland, Aug. 28th, 1914.
Hela	'95	2,003	4-3-4 in.	Torpedoed by the British submarine <i>E-9</i> off the German Coast, Sept. 13th, 1914.

* *Emden* is under salvage for Australian Navy.

Mine-layer :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Albatross	'07	2,165	8-3·4 in. 400 mines	Disabled by gun-fire of Russian cruisers, driven ashore near Ostergarm Lighthouse, Goth- land Island (Baltic) and interned, July 1st, 1915.

Unprotected Cruisers (Sloops) :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Geier	'94	1,604	8-4·1 in.	Interned at Honolulu, Nov. 8th, 1914.
Komorán I*	'92	„	Nil	Scuttled at Tsing-tao, Nov. 4th, 1914.

* *Komorán I* was disarmed at time of loss. For *Komorán II* (ex-Russian *Riasan*) see Armed Merchant Cruisers.

Gunboats :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Eber *	'03	984	Nil	Interned at Bahia, Sept. 1914.
Luchs *	'98- '99	886	2-4·1 in.	Scuttled at Tsing-tao, Nov. 4th, 1914. (Wrecks since sold to Japanese salvage companies.)
Tiger*				
Iltis	'03	220	Nil	Interned in Chinese port, Aug. 1914; since reported to have been sold by auction. (Both shallow-draught river gun- boats.)
Jaguar				
Tsing-tao*	'05	640	3-1 pr.	Scuttled at Yap Island (Caro- line Islands) about Sept. 1914 (Surveying Ship).
Vaterland*				
Planet	„	„	„	Sunk by gun-fire of British light cruiser <i>Pegasus</i> at Dar- es-Salaam, Aug. 9th, 1914 (Surveying Ship).
Möwe				

* Were disarmed at time of loss or internment. *Eber* is reported to have supplied arma-
ment to Armed Mercantile Cruiser *Kap Trajalgar*; *Tiger* and *Luchs* reported to have similarly
supplied guns to the Armed Mercantile Cruiser *Prinz Eitel Friedrich*.

Torpedo-Craft—Destroyers (D.), Torpedo-boats (T.B.):

Number or Name.	Date.	Displ. (Tons).	Guns and Tubes (T).	Cause, locality, and date of loss.
One of G-196 type (D.)	'11	689	2-24 pr. 4-18 in. T.	Torpedoed off German Coast by an unknown British submarine, July 26th, 1915.
V-187 (D.)	'10	"	"	
S-124 (D.)	'04	463	3-4 pr. 3-18 in. T.	Sunk by gun-fire of British light cruisers and destroyers in the Bight of Heligoland, Aug. 28th, 1914.
S-119 (D.)	'02- '03	413	"	Sunk after collision with an unknown Danish steamer in the North Sea, Nov. 24th, 1914.
S-118 (D.)				
S-117 (D.)				
S-115 (D.)				All four destroyers sunk by gun-fire of the British light cruiser <i>Undaunted</i> and destroyers of the <i>L</i> type off the Dutch Coast, Oct. 17th, 1914.
S-116 (D.)	"	"	"	Torpedoed off the German Coast by the British submarine <i>E-9</i> , Oct. 16th, 1914.
S-90 (D.)	'09	396	"	Wrecked on coast of Kiao-Chau, Oct. 21st, 1914.
Taku (D.)	'98	393	2-4 pr.	Scuttled at Tsing-tao, Nov. 4th, 1914.
Unidentified (D.)	—	—	—	Sunk by gun-fire of French destroyers <i>Branlebas</i> and <i>Oriflamme</i> off Ostend on night of Aug. 22nd, 1915.
And Others (D.)	—	—	—	Sunk by mines and other causes at various dates (including two believed to have been sunk by gun-fire in Heligoland Bight, Aug. 28th, 1914). No details available.
Unidentified (T.B.)	—	—	—	Torpedoed in the Baltic while in company with German light cruiser <i>Bremen</i> , by an unknown British submarine, Dec. 17th, 1915.
Unidentified (T.B.)	—	—	—	Sunk by collision with the Sassnitz-Trelleborg Ferry <i>Pruessen</i> in the Baltic, Oct. 15th, 1915.
Unidentified (T.B.)	—	—	—	Sunk off Belgian Coast by Dover Patrol between Aug. 22nd and Nov. 19th, 1915. Exact date not known.
And others (T.B.)	—	—	—	Mined and sunk by other causes in the North Sea and Baltic at various dates. No details available.

Note.—Another destroyer, *S-126*, is reported to have been torpedoed by a British submarine on Oct. 6th, 1914, but is probably *S-116* (given above) wrongly identified.

Submarines :

All details of German submarines are so unreliable that no figures are appended to following list of losses. The numbers given are those officially announced, where stated. But the index-numbers on German submarines have been continuously "faked" to prevent accurate identification.

Number.	Cause, locality, and date of loss.
U-30	Mined off Borkum, June 22nd, 1915. (Possibly salvaged.)
U-29	Sunk about March 1915. Exact cause, locality, and date not known.
U-27*	Acknowledged as "missing" by the German Admiralty in August 1915. (Last heard of on Aug. 10th, 1915.)
U-18	Sunk near Pentland Skerries by British destroyers of the <i>Alver</i> type, Nov. 24th, 1914.
U-15	Rammed or sunk by gun-fire of the British light cruiser <i>Birmingham</i> in the North Sea, Aug. 8th, 1914.
U-14	Sunk about June 9th, 1915. Exact cause, locality, and date not known.
U-12	Sunk by British destroyer <i>Ariel</i> , March 10th, 1915. (Exact locality not known.)
U-8 (a)	Sunk off Dover by the British destroyers <i>Maori</i> and <i>Ghurka</i> , March 4th, 1915.
U-8 (b)	Stranded on Terschelling Island (off the Dutch Coast) and interned, Nov. 6th, 1915.
Unidentified *	Sunk 70 miles S. of Queenstown (Southern Irish Coast) by gun-fire of H.M. Armed Auxiliary <i>Baralong</i> , Aug. 19th, 1915.
Unidentified	Sunk off Ostend by aero-bomb from British seaplane (Flight-Commander A. W. Bigsworth, R.N.A.S.), Aug. 26th, 1915.
Unidentified	Sunk off Middelkerke (Belgian Coast) by aero-bomb from British seaplane (Flight Sub-Lieut. Viney, R.N.A.S.), Nov. 29th, 1915.
Unidentified	Sunk or captured by British patrol craft in the Irish Sea after being rammed and severely damaged by the S.S. <i>Coltingham</i> , June 1915. (Exact date not known.)
Unidentified }	{ Both submarines destroyed off Belgian Coast by the Dover Patrol between Aug. 22nd and Nov. 19th, 1915. (Exact cause and dates of losses not known.)
Unidentified }	
And Others	Mined, rammed, destroyed by explosives and gun-fire, disabled, netted, and captured by British warships, auxiliaries, armed trawlers, patrol craft, etc., at various dates. Totals and details not published.

Submarines (*continued*) :

Number.	Cause, locality, and date of loss.
<i>And Others</i>	"Probably sunk," whose definite loss cannot at present be ascertained. (Includes one rammed off Belgian Coast by British destroyer <i>Badger</i> , Oct. 24th, 1914.
<i>And Others</i>	Rammed and sunk by British mercantile craft. No details available. (Includes one so attacked by S.S. <i>Thordis</i> off Beachy Head, Feb. 28th, 1915.)
<i>And Others</i>	Accidentally lost at various dates. Details not known. (Includes one which fouled trawls of North Shields trawler <i>Alexander Hastie</i> , capsized and sank, 105 miles E.N.E. of Longstone Lighthouse, Feb. 23rd, 1915.)
<i>And Others</i>	Destroyed by Russian warships, patrol craft, etc., in the Baltic, by French and Allied warships, auxiliaries, etc., in the Atlantic, Ægean , and Mediterranean Seas at various dates. Details not published.

* It is possible that *U-27* was the unidentified German submarine destroyed by H.M.S. *Baralong*.

Note.—German submarines under construction at the Cockerill Yard, Hoboken, Antwerp, and at Zeebrugge, have been destroyed and severely damaged while on the stocks and while fitting out, by naval bombardments and by aero-bombs.

Vedette Boats :

A-2 and A-6, two small vedette boats, were sunk by gun-fire of British destroyers of the *L* type in the North Sea, May 2nd, 1915.

Armed Merchant Cruisers :

Name.	Cause, locality, and date of loss.
Kaiser Wilhelm der Grosse	Sunk by gun-fire of the British light cruiser <i>Highflyer</i> off the Rio del Oro (N.E. African Coast), Aug. 28th, 1914.
Prinz Eitel Friedrich	Interned at Norfolk, U.S.A., April 9th, 1915.
Kronprinz Wilhelm	Interned at Norfolk, U.S.A., April 27th, 1915.
Kap Trafalgar	Sunk by gun-fire of British armed mercantile cruiser <i>Carmania</i> , off East Coast of South America, Sept. 14th, 1914.
Komoran II.	Ex-Russian transport <i>Riasan</i> , captured 100 miles north of Nagasaki by German light cruiser <i>Emden</i> , Aug. 6th, 1914. Taken to Tsing-tao, receiving guns of <i>Komoran I</i> , and renamed <i>Komoran II</i> . Interned at Guam, Dec. 16th, 1914.
Navarra	Set on fire and scuttled to avoid capture off the Rio de la Plata, S. America, Nov. 11th, 1914.
Berlin (<i>Mine-layer</i>)	Interned at Trondjheim, Norway, Nov. 16th, 1914.

Armed Merchant Cruisers (*continued*) :

Name.	Cause, locality, and date of loss.
Königin Luise (<i>Mine-layer</i>)	Sunk by gun-fire of British light cruiser <i>Amphion</i> and destroyers of the <i>L</i> type off the mouth of the Thames, Aug. 5th, 1914.
Ruhin (?) (<i>Mine-layer</i>)	Reported to have been scuttled at Tsing-tao, Nov. 4th, 1914.
Meteor (<i>Mine-layer</i>)	Scuttled in the North Sea to avoid capture, Aug. 8th, 1915.

Other Mercantile Auxiliaries and Tenders (arranged alphabetically) :

Note.—Ships marked ** used as tenders to commerce-destroying light cruisers and armed mercantile cruisers ; other ships marked * are believed to have been used in a like capacity.

Name.	Cause, locality, and date of loss.
Æolus *	Sunk off Honolulu by Japanese battleship <i>Hizen</i> , Oct. 24th, 1914.
Baden **	Sunk by British light cruiser <i>Bristol</i> and armed mercantile cruiser <i>Macedonia</i> near the Falkland Islands, Nov. 8th, 1914.
Bethania **	Captured by British armoured cruiser <i>Essex</i> , 300 miles off Cape Hatteras, and taken to Kingston, Jamaica, Sept. 10th, 1914.
Bünz	Patrol ship mined on night of Dec. 17th, 1915, off Rudkjøbing on the Danish Island of Langeland.
Buresk **	Collier captured by German light cruiser <i>Emden</i> , Sept. 27th, 1914. Scuttled at the Keelings Islands, Nov. 10th, 1914.
Eleonore Woermann *	Sunk in South Atlantic by Australian battle-cruiser <i>Australia</i> , Jan. 6th, 1915.
Emden II.	Ex-schooner <i>Ayesha</i> captured at Keelings Islands by German light cruiser <i>Emden</i> , Nov. 10th, 1914. Scuttled when in company with German steamer <i>Choising</i> , Dec. 15th, 1914.
Elsbeth *	Collier bound from Tsing-tao to Yap Island (Caroline Islands). Sunk by British armoured cruiser <i>Hampshire</i> in Sept. or Nov. 1914.
Exford **	Captured by German light cruiser <i>Emden</i> and used as tender. Recaptured by British armed mercantile cruiser <i>Empress of Asia</i> and taken to Singapore, Dec. 15th, 1914.
Farn **	Captured by German light cruiser <i>Karlsruhe</i> , Sept. 25th, 1914, and used as tender. Interned at Porto Rico, Jan. 12th, 1915.

Other Mercantile Auxiliaries and Tenders (*continued*) :

Name.	Cause, locality, and date of loss.
Graecia *	Captured and taken into Gibraltar, Oct. 15th • 1914.
Hoffnung *	(Ex- <i>Indrani</i> .) Captured by German light cruiser <i>Karlsruhe</i> , Sept. 17th, 1914. (Present ownership not known.)
Hermann von Wiesmann	Disabled and captured by H.M.S. <i>Gwendolen</i> at Sphinx Haven (E. shore of Lake Nyassa, Central Africa), about Aug. 13th, 1914.
Holger *	Interned at Honolulu, Feb. 20th, 1915.
Itolo	Sunk by gun-fire of French "aviso" <i>Surprise</i> in Corisco Bay, Sept. 1914.
Karnak *	Interned, Nov. 1914. (Details wanted.)
Kingani	Armed steamer disabled by gun-fire of unknown British ship and captured on Lake Tanganyika, Dec. 26th, 1915.
Komet	Captured at Rabaul by Australian Expeditionary Force (now H.M.A.S. <i>Una</i>).
Locksun *	Interned Nov. 8th, 1914. (Details wanted.)
Macedonia *	Captured after breaking out of internment at Las Palmas (Canary Islands), and taken to Gibraltar, May 2nd, 1915.
Markomannia *	Sunk by gun-fire of British light cruiser <i>Yarmouth</i> near Sumatra, Oct. 14th, 1914.
Ophelia	Brought into Yarmouth by British destroyer <i>Meteor</i> , Dec. 18th, 1914. Condemned as lawful prize by British Prize Court, May 20th, 1915, for illegal use under the disguise of a hospital-ship.
Paklat *	Captured in attempting to run through blockade of Tsing-tao and taken to Hong-Kong, Aug. 21st, 1914.
Pontoporos *	Greek collier captured by German light cruiser <i>Emden</i> in Bay of Bengal, Sept. 10th, 1914. Recaptured by British light cruiser <i>Yarmouth</i> , Oct. 12th, 1914. (Since restored to original Greek owners.)
Pruessen	Reported to have been interned at Sarang (?) Bay. (Details wanted.)
Rhios	Sunk by gun-fire of French "aviso" <i>Surprise</i> in Corisco Bay, Sept. 1914.
Santa Isabel	Sunk by gun-fire of British light cruiser <i>Bristol</i> and armed mercantile cruiser <i>Macedonia</i> off the Falkland Islands, Nov. 8th, 1914.
Siu Mow	Captured by Japanese destroyer near Tomogashima Island, Sept. 15th, 1914. (Now Japanese Fleet Auxiliary <i>Tomoshima Maru</i> .)

Other Mercantile Auxiliaries and Tenders (*continued*):

Name.	Cause, locality, and date of loss.
Somali *	Captured near Mafia Island off German East African Coast and scuttled in Rufidji River. Believed to have been acting as tender to German light cruiser <i>Königsberg</i> .
Spreewald *	Captured by British armoured cruiser <i>Berwick</i> and taken into St. Lucia, Sept. 12th, 1914.
Soden	Captured, Sept. 1914, in the Cameroons River by British armoured cruiser <i>Cumberland</i> .
Tannenfels *	Captured in Basilan Strait by unknown British warship and taken into Hong-Kong, Oct. 8th, 1914. (Now H.M.S. <i>Basilan</i> .)
Unidentified	Auxiliary vessel torpedoed by unknown British warship (commanded by Lieut.-Commander K. J. Duff-Dunbar, R.N., D.S.O.) on Dec. 22nd, 1915. (Exact locality not known.)
Vandyck *	Captured by German light cruiser <i>Karlsruhe</i> , Oct. 26th, 1914. Present ownership not known. (This is the last information of the <i>Karlsruhe</i> since her disappearance.)
Vege (?)	Armed German patrol vessel or guard-ship sunk off Libau by Russian torpedo-craft, about Nov. 25th, 1915.

The following German steamers were captured in the Cameroons River by the British armoured cruiser *Cumberland* about the end of Sept. 1914. Some may have been used as supply ships to German commerce-raiding light cruisers and armed mercantile cruisers:

<i>Aline Woermann</i>	<i>Henriette Woermann</i>	<i>Max Brock</i>
<i>Arnfried</i>	<i>Herzogin Elisabeth *</i>	<i>Paul Woermann</i>
<i>Erna Woermann</i>	<i>Jeanette Woermann</i>	<i>Renata Amsinck</i>
<i>Hans Woermann</i>	<i>Kamerun</i>	

* Colonial Government steamer scuttled but capable of salvage.

Various German armed trawlers, mine-sweepers, armed yachts, etc., have been lost in the Baltic and North Sea by mines, wrecking, attacks by British submarines, and other causes; others have been captured. No details available.

G.—AUSTRIAN NAVY.

Battleships and Armoured Cruisers.—Nil.

Protected and Light Cruisers :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
<i>Unidentified</i>	09- '13	3,384	9 or 7-4.1 in.	Light cruiser of the <i>Novara-Admiral Spaun</i> type, torpedoed by the French submarine <i>Foucault</i> , in Lower Adriatic, Jan. 13th, 1916.
Kaiserin Elisabeth	'90	3,937	8-5.9 in.	Scuttled at Tsing-tao to avoid capture, Nov. 4th, 1914.
Zenta	'97	2,363	8-4.7 in.	Sunk by gun-fire of French armoured cruisers at Castellastua, Aug. 18th, 1914.

Note.—An Austrian light cruiser of the *Admiral Spaun* type and three or four large Chinese destroyers were building at Monfalcone at the beginning of the war. Probably the hulls were destroyed before the evacuation of the port by the Austrian troops. The dock-yard has since been bombarded and burnt out.

Torpedo-Craft—Destroyers (D.), Torpedo-boats (T.B.), and Submarines (S.):

Name.	Date.	Displ. (Tons).	Guns and Tubes (T.).	Cause, locality, and date of loss.
Lika (D.) } Triglav (D.) }	'13	837	2-3.9 in 6-11 pr. 2 or 4 T.	Both destroyers mined off Durazzo in the Adriatic on Dec. 29th, 1915.
No. 19 (T.B.)	'86	78	2-1 pr. 1 tube	Mined near Pola, Aug. 17th, 1914.
U-12 (S.)	'14	700 1,070	? guns ? tubes	Torpedoed in the Adriatic by an unknown Italian submarine, Aug. 10th, 1915.
U-3 (S.)	'08	240 300	2-18 in. T.	Sunk by gun-fire of French destroyer <i>Bisson</i> off the Montenegrin Coast, Aug. 15th, 1915.
<i>And Others</i>	—	—	—	Sunk in the Adriatic and Mediterranean by various hostile attacks, mines and other causes. No details published.

Monitors and Vedette Boats (*Danube Flotilla*):

Name or Number.	Date.	Displ. (Tons).	Guns and Tubes (T.).	Cause, locality, and date of loss.
Temes	'04	433	2-4.7 in. 1-4.7 in. (how'z'r)	Mined in the Danube River, Nov. 23rd, 1914.
<i>Another Monitor</i>	?	?	?	Torpedoed in night attack made by British picket-boat operating in the Danube River, April 22nd, 1915.
<i>And Others</i>	—	—	—	Vedette boats, armed patrol motor-launches, mine-sweepers, and other smaller craft sunk by mines and gunfire in the Danube at various dates. No details available.

Mercantile Auxiliaries, etc.:

Name.	Cause, locality, and date of loss.
Bathori	Sunk off Spanish Coast by British cruiser <i>Minerva</i> , Sept. 3rd, 1914.
Beethoven	(Ex-training ship.) Mined in the Adriatic, Dec. 17th, 1914.
<i>And Others</i>	Smaller patrol craft, mine-sweepers, armed yachts, etc., sunk in the Adriatic by derelict mines and other causes. No details available.

H.—TURKISH NAVY.

According to a statement made by Mr. Asquith, the total of Turkish warships, supply ships, and other auxiliaries sunk by British submarines in the Sea of Marmora and the Dardanelles was, on Oct. 26th, 1915, as follows:

2 battleships
5 gunboats
1 torpedo-boat (+ 1)*
8 transports
197 supply ships (+ 4)*

* To these figures must be added 1 torpedo-boat (*Yar Hissar*), 1 supply-steamer of 3,000 tons, and three supply sailing-ships sunk in the Sea of Marmora by an unknown British submarine on Dec. 2nd-3rd, 1915.

Battleships :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Kheyr-ed-din Barbarosse	'91	9,900	6-11 in. (old) 8-3·4 in.	Torpedoed in the Sea of Marmora by an unknown British submarine, Aug. 3rd, 1915.
Messoudieh*	'74 (02)	10,000	2-9·2 in. 12-6 in.	Torpedoed in the Narrows by the British submarine <i>B-11</i> , Dec. 13th, 1914.

* *Messoudieh* was reconstructed at Genoa in 1902.

Cruiser :

Name.	Date.	Displ. (Tons).	Guns.	Cause, locality, and date of loss.
Medjidieh	'03	3,330	2-6 in. 8-4·7 in.	Mined in the Black Sea, April 4th, 1915. (Since salvaged and repaired at Odessa; reported to be now the Russian cruiser <i>Prut</i> or <i>Admiral Korniloff</i> .)

Gunboats :

Name.	Date.	Displ. (Tons).	Guns and Tubes (T.).	Cause, locality, and date of loss.
Burak Reis	'12	502	2-3·9 in.	Scuttled at Tschema to avoid capture, Oct. 31st, 1914.
Hiziz Reis	"	"	"	Mined in the Black Sea, Dec. 1914.
<i>One of Burak Reis type</i>	"	"	"	Both gunboats disabled by gun-fire of three Russian torpedo-craft, driven ashore and wrecked on Kephken Island, Black Sea, Dec. 10th, 1915. (One wreck destroyed by explosion about three days later.)
<i>One of Malatia type</i>	'08	210	2-3 pr. 1-18 in. T.	
Marmaris	'07	492	4-9 pr. 2-1 pr.	Sunk by gun-fire of British sloops and river craft in the Tigris River, June 1915.
Peik-i-Shevkot	"	763	2-4·1 in. 6-6 pr. 2-1 pr.	Torpedoed on the Sea of Marmora by an unknown British submarine, April 29th, 1915.

Gunboats (*continued*):

Name.	Date.	Displ. (Tons.)	Guns and Tubes (T.).	Cause, locality, and date of loss.
Berk-i-Satvet	'07	763	2-4'1 in. 6-6 pr. 2-1 pr.	Torpedoed in the Sea of Marmora by an unknown British submarine, Aug. 8th, 1915.
Pelenk-i-Deria	'90	886	2-4'1 in. 6-3 pr.	Torpedoed in the Sea of Marmora by an unknown British submarine, May 22nd, 1915.
Two Others <i>unidentified</i>	—	—	—	Torpedoed by unknown British submarines in addition to foregoing gunboats; one so sunk on May 3rd, 1915. (See Mr. Asquith's statement at head of Turkish losses.)
Unidentified	—	—	—	Mined in the Black Sea, Jan. 21st, 1915.
And Others	—	—	—	Sunk by Russian bombardments of Turkish Black Sea ports, by mines and other causes. No details available.

Torpedo-Craft—Destroyer (D.), Torpedo-boats (T.B.), and Submarine (S.):

Name.	Date.	Displ. (Tons.)	Guns and Tubes.	Cause, locality, and date of loss.
Yar Hissar (D.)	'07	284	1-6 pr. 6-3 pr. 3 tubes	Torpedoed in the Sea of Marmora by an unknown British submarine, Dec. 2nd, 1915.
Timur Hissar (T.B.)	„	96	2-1 pr. 3 tubes	Driven ashore and wrecked on Greek Island in the Aegean Sea and interned, April 17th, 1915.
Unidentified (T.B.)	—	—	—	Torpedoed by an unknown British submarine in addition to the foregoing torpedo-boat. (Included in Mr. Asquith's statement given at the head of Turkish losses.)
Unidentified (S.)	'15	?	?	Stranded on Anatolian Coast and destroyed by Russian torpedo-craft, Jan. 11th, 1916.
And Others	—	—	—	Mined, sunk by gun-fire and other causes in the Black Sea and Sea of Marmora. No details available.

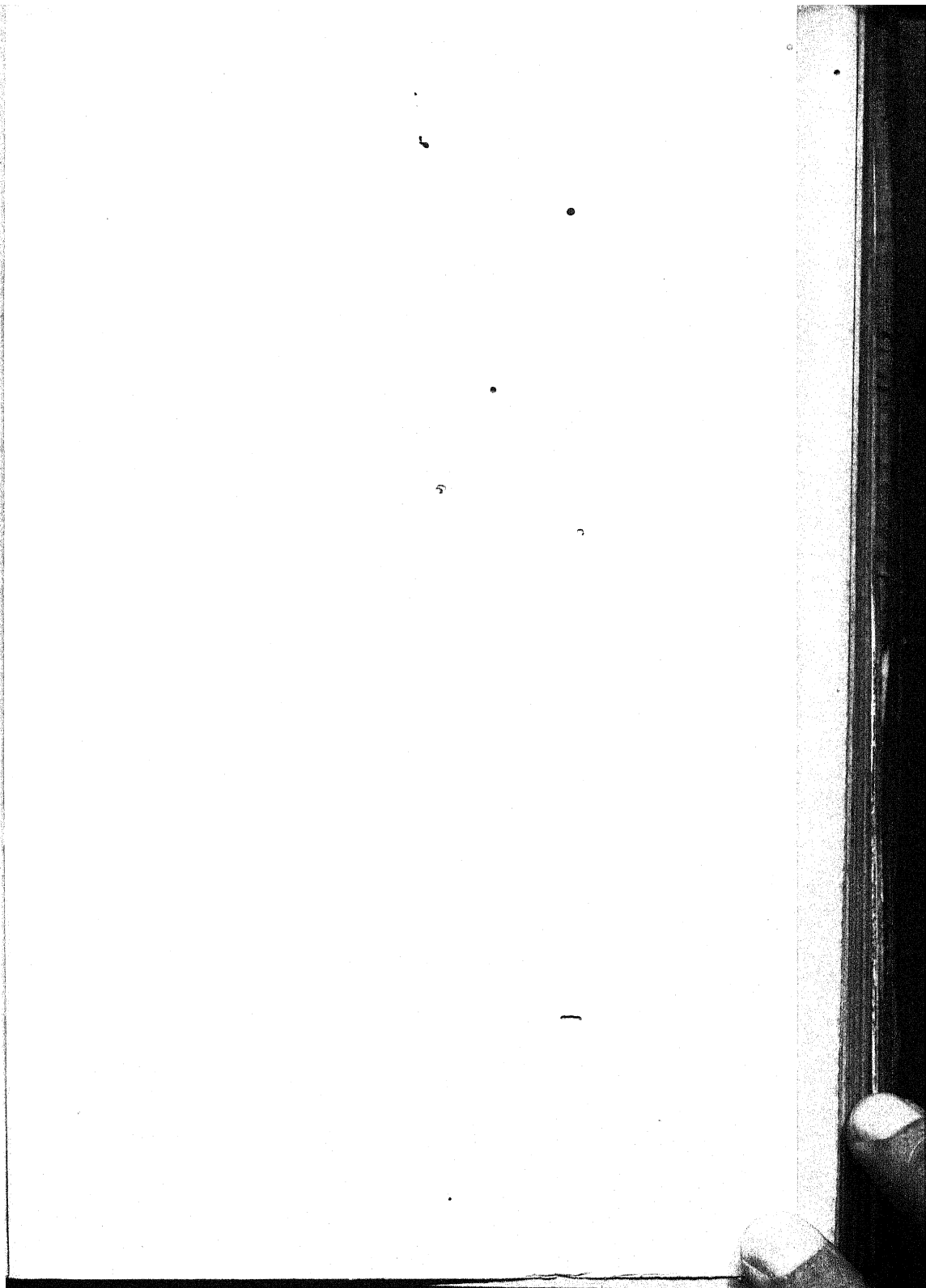
Auxiliary Ships :

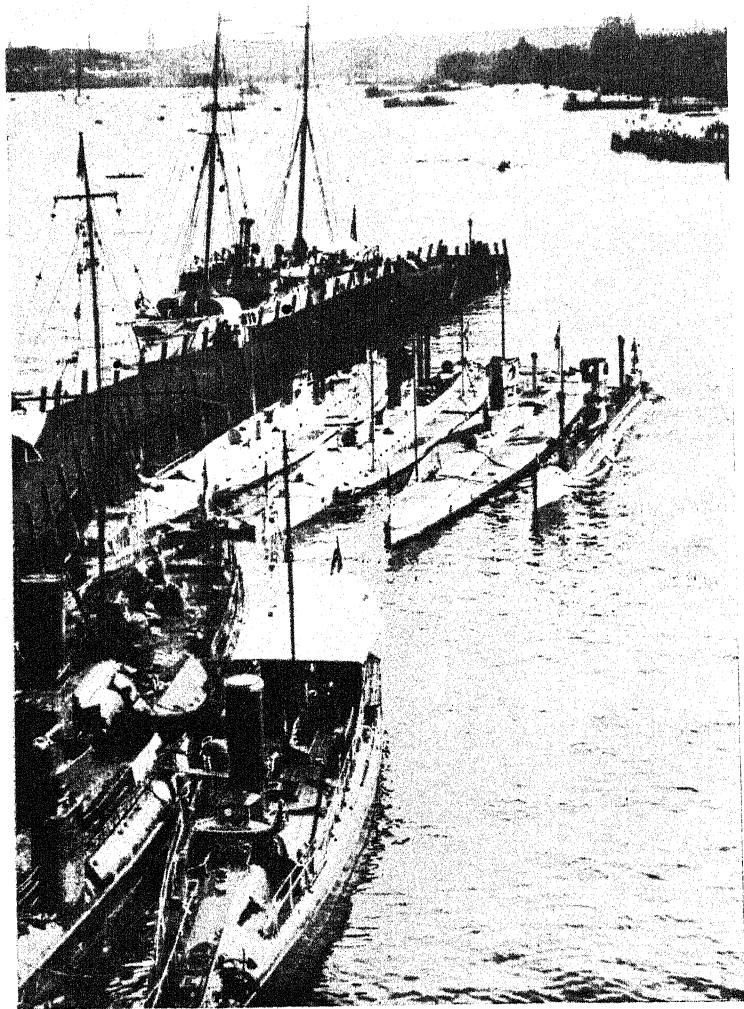
Totals.	Remarks.
<i>8 Transports</i>	Unidentified ; sunk by unknown British submarines in the Sea of Marmora.*
<i>And other Transports</i>	Sunk by aero-bombs in the Sea of Marmora.
<i>201 Supply Ships</i>	Unidentified ; sunk by unknown British submarines in the Sea of Marmora.*
<i>And other Auxiliaries</i>	Destroyed by gun-fire of Allied warships in the Black Sea, Sea of Marmora, Tigris River, and on the Syrian Coast, also by mines and other causes. No details available.

* See Mr. Asquith's statement at head of Turkish losses.

I.—BULGARIA.

No losses reported at the time these tables were prepared, beyond an unconfirmed report that a torpedo-boat of the *Bistri* class had been destroyed during a Russian bombardment of Varna in the Black Sea.





[Photo, Newspaper Illustrations Co.]

GERMAN SUBMARINES IN KIEL HARBOUR

TABLE A.—THE ALLIED, ENEMY, AND NEUTRAL "DREADNOUGHTS."

EXPLANATORY NOTES.

1. The ships completed at the date this volume was issued are given in heavy type. In the case of ships belonging to the belligerent navies, only approximate dates of completion can be given for Dreadnoughts finished since the outbreak of war. Where information is lacking on this point, the dates of completion anticipated before hostilities have been adhered to, although construction has been greatly accelerated.

2. Displacements are in English tons. (e) after a figure means "estimated." Where (r) appears in the horse-power column, the engines are of the reciprocating type. The remaining vessels are driven by turbines. An asterisk after a vessel's name indicates a "battle-cruiser" as distinct from a "battle-ship." In the "Speed in Knots" column, the speeds attained on trials are indicated by heavier type. No figures are however available of warships tested and completed since March 1914.

3. Details of ships under construction in August 1914 and laid down since the beginning of war are given with all reserve. Certain details of British warships are withheld from publication. Except for adding those ships whose purchase has been officially announced by the Admiralty and one or two other details, the British Dreadnought Table is based on information available up to July 31st, 1914.

4. A more numerous battery of heavy guns (11 in. to 15 in.) does not necessarily denote a stronger broadside or fore and aft fire. Many British ships, though carrying two less weapons, fire the same number of guns on the broadside as contemporary German vessels; the weight of metal fired, owing to the difference in calibre, is in favour of the British ships. Thus the *Neptune* class fires two more guns on the broadside than the eight German ships of the *Nassau* and *Osifriesland* types, though these latter mount an extra pair of guns.

The World's "Dreadnoughts" (Continued).

Name.	Where Built or Building.	Displacement in Tons.	Designed H.P.	Speed in Knots.	Armament.		When Laid down.	When Launched.	When Commissioned for Service.	Notes.
					Main.	Secondary.				
BRITISH EMPIRE.										
Dreadnought	Portsmouth Dockyard	17,900	23,000	22.4	10-12 in. B.	2-4 3 in. Q.	Oct. 2, 1905	Feb. 10, 1906	Dec. 11, 1906	1905 Naval Programme
Indefatigable*	Fairfield Co., Glasgow	17,250	41,000	23.7	8-12 in. B.	16-4 in. Q.	Mar. 1, 1906	Mar. 16, 1907	June 29, 1908	1906 Naval Programme
Infelible*	Fairfield Co., Glasgow	17,250	41,000	23.4	8-12 in. B.	16-4 in. Q.	Feb. 5, 1906	June 26, 1907	Oct. 20, 1908	1906 Naval Programme
Indefatigable*	Clydebank, Newcastle	17,250	41,000	23.6	8-12 in. B.	16-4 in. Q.	April 2, 1906	June 26, 1907	Mar. 20, 1909	1906 Naval Programme
Belborough	Portsmouth Dockyard	18,000	23,000	22.7	10-12 in. B.	16-4 in. Q.	Dec. 3, 1906	Aug. 27, 1907	Feb. 26, 1909	1907 Naval Programme
Téméraire	Portsmouth Dockyard	18,000	23,000	22.74	10-12 in. B.	16-4 in. Q.	Jan. 1, 1907	Aug. 27, 1907	May 10, 1909	1907 Naval Programme
Sussex	Elswick, Newcastle	18,000	23,000	21.62	10-12 in. B.	16-4 in. Q.	Feb. 6, 1907	Nov. 7, 1907	June 3, 1910	1907 Naval Programme
St. Vincent	Portsmouth Dockyard	19,250	24,500	21.9	10-12 in. B.	20-4 in. Q.	Dec. 30, 1907	Sept. 16, 1908	June 10, 1910	1908 Naval Programme
Callington	Devonport Dockyard	19,250	24,500	22.4	10-12 in. B.	20-4 in. Q.	Feb. 3, 1908	Nov. 7, 1908	April 10, 1910	1908 Naval Programme
Vanguard	Vickers, Barrow	18,750	43,000	22.4	10-12 in. B.	20-4 in. Q.	April 2, 1908	Feb. 22, 1909	Mar. 24, 1911	1908 Naval Programme
Indefatigable*	Devonport Dockyard	19,900	25,000	22.7	8-12 in. B.	16-4 in. Q.	Feb. 23, 1909	Oct. 28, 1909	Jan. 11, 1911	1909 Naval Programme
Neptune	Portsmouth Dockyard	20,000	25,000	22.6	10-12 in. B.	16-4 in. Q.	July 8, 1909	Sept. 30, 1910	Aug. 8, 1911	1909 Naval Programme
Calcutta	Scotts, Greenock	20,000	25,000	22.6	10-12 in. B.	16-4 in. Q.	July 30, 1909	May 20, 1910	July 5, 1912	1909 Naval Programme
Heraules	Palmer, Barrow	20,000	25,000	21.91	10-12 in. B.	16-4 in. Q.	Nov. 29, 1909	Aug. 26, 1910	June 14, 1912	1909 Naval Programme
Orion	Portsmouth Dockyard	22,500	27,000	22.31	10-13-5 in. B.	16-4 in. Q.	May 2, 1910	May 1, 1911	Nov. 21, 1912	Commonwealth ship.
Princess Royal*	Devonport Dockyard	26,350	70,000	29.78	8-13-5 in. B.	16-4 in. Q.	April 11, 1910	May 1, 1911	April 16, 1912	New Zealand ship
Conqueror	Beardmore, Glasgow	22,500	27,000	23.13	10-13-5 in. B.	16-4 in. Q.	April 1, 1910	May 1, 1911	June 16, 1912	1910 Naval Programme
Monarch	Elswick, Newcastle	22,500	27,000	21.88	10-13-5 in. B.	16-4 in. Q.	April 13, 1910	Feb. 1, 1911	June 16, 1912	1910 Naval Programme
Thunderer	Thames Iron Works	22,500	27,000	21.45	10-13-5 in. B.	16-4 in. Q.	June 23, 1910	Oct. 25, 1911	June 16, 1913	1910 Naval Programme
Australia*	Clydebank, Glasgow	19,200	44,000	26.89	8-12 in. B.	16-4 in. Q.	June 23, 1910	Oct. 25, 1911	June 16, 1913	1911 Naval Programme
New Zealand*	Fairfield Co., Glasgow	18,800	44,000	26.385	8-12 in. B.	16-4 in. Q.	June 20, 1910	Oct. 18, 1911	Nov. 22, 1912	1910 Naval Programme
King George V.	Portsmouth Dockyard	23,000	27,000	22.127	10-13-5 in. B.	16-4 in. Q.	Jan. 16, 1911	Oct. 18, 1911	Nov. 15, 1913	1910 Naval Programme
Centurion	Devonport Dockyard	23,000	27,000	21.888	10-13-5 in. B.	16-4 in. Q.	Jan. 16, 1911	Nov. 18, 1911	May 22, 1913	1910 Naval Programme
Ajax	Scotts, Greenock	23,000	27,000	22.47	10-13-5 in. B.	16-4 in. Q.	Feb. 27, 1911	Mar. 21, 1912	Oct. 1913	1910 Naval Programme
Audacious	Cammell, Laird, Birkenhead	23,000	27,000	21.5	8-13-5 in. B.	16-4 in. Q.	Mar. 6, 1911	Sept. 13, 1912	Sept. 3, 1913	1911 Naval Programme
Queen Mary*	Palmer, Barrow	27,000	75,000	30.92	8-13-5 in. B.	16-4 in. Q.	Jan. 15, 1912	Oct. 12, 1912	Mar. 10, 1914	1911 Naval Programme
Iron Duke	Portsmouth Dockyard	25,000	29,500	21	10-13-5 in. B.	12-6 in. Q.	Jan. 25, 1912	Nov. 24, 1912	June 1914	1911 Naval Programme
Marborough	Devonport Dockyard	25,000	29,500	21	10-13-5 in. B.	12-6 in. Q.	Jan. 25, 1912	Nov. 27, 1912	Aug. 1914	1911 Naval Programme
Emperor of India	Vickers, Barrow	25,000	29,500	21	10-13-5 in. B.	12-6 in. Q.	May 31, 1912	Nov. 27, 1912	Aug. 1914	1911 Naval Programme
Bombay	Beardmore, Glasgow	25,000	29,500	21	10-13-5 in. B.	12-6 in. Q.	May 31, 1912	Nov. 27, 1912	Aug. 1914	1911 Naval Programme
Agincourt	Elswick, Newcastle	27,500	45,000	22	14-12 in. B.	20-6 in. Q.	Sept. 14, 1911	Nov. 22, 1913	Aug. 1914	Purchased Aug. 5, 1914
Erlin	Vickers, Barrow	23,000	26,500	21	10-13-5 in. B.	16-6 in. Q.	Feb. 6, 1911	Sept. 3, 1913	Aug. 1914	Purchased 1914
Canada	Elswick, Newcastle	28,000	37,000	21	10-14 in. B.	16-6 in. Q.	Dec. 15, 1912	Nov. 27, 1913	End 1914	1911 Naval Programme
Tiger*	Clydebank, Glasgow	28,000	37,500	28	8-13-5 in. B.	12-6 in. Q.	June 20, 1912	Dec. 15, 1913	End 1914	1911 Naval Programme
Queen Elizabeth	Portsmouth Dockyard	27,500	58,000	25	8-15 in. B.	16-6 in. Q.	Oct. 21, 1912	Oct. 16, 1913	End 1914	1912 Naval Programme
Warspite	Portsmouth Dockyard	27,500	58,000	25	8-15 in. B.	16-6 in. Q.	Oct. 21, 1912	Oct. 16, 1913	Early 1915	1912 Naval Programme
Valliant	Fairfield Co., Glasgow	27,500	58,000	25	8-15 in. B.	16-6 in. Q.	Jan. 31, 1913	Nov. 28, 1914	1915	1912 Naval Programme
Barham	Clydebank, Glasgow	27,500	58,000	25	8-15 in. B.	16-6 in. Q.	Feb. 24, 1913	—	1914	1912 Naval Programme
Malaya	Elswick, Newcastle	27,500	58,000	25	8-15 in. B.	16-6 in. Q.	July 1913	—	1914	Malay States ship
—	Portsmouth Dockyard	27,500	58,000	25	8-15 in. B.	16-6 in. Q.	—	—	—	1914 Naval Programme
ROYAL SOVEREIGN	Portsmouth Dockyard	25,250	51,000	21	8-15 in. B.	16-6 in. Q.	Jan. 15, 1914	Jan. 27, 1915	—	1913 Naval Programme
ROYAL OAK	Devonport Dockyard	25,250	51,000	21	8-15 in. B.	16-6 in. Q.	Jan. 15, 1914	Nov. 19, 1914	—	1913 Naval Programme

RESOLUTION	Palmer, Jarrow	25,280	31,000	21	8-15 in. B.	16-6 in. Q.	Nov. 29, 1913	1913	1913	1913 Naval Programme
RAMILLES	Beardmore, Glasgow	25,280	31,000	21	8-15 in. B.	16-6 in. Q.	Nov. 29, 1913	1913	1913	1913 Naval Programme
REVENGE	Vickers, Barrow	25,280	31,000	21	8-15 in. B.	16-6 in. Q.	Dec. 22, 1913	1913	1913	1913 Naval Programme
REVENGE	Fairfield Co., Glasgow	25,280	31,000	21	8-15 in. B.	16-6 in. Q.	Dec. 22, 1913	1913	1913	1913 Naval Programme
REVENGE	Palmer, Jarrow	25,280	31,000	21	8-15 in. B.	16-6 in. Q.	Dec. 22, 1913	1913	1913	1913 Naval Programme
RESISTANCE	Devonport Dockyard	25,280	31,000	21	8-15 in. B.	16-6 in. Q.	Dec. 22, 1913	1913	1913	1913 Naval Programme
FRANCE.										
Voltaire	La Seyne, Toulon	18,037	22,500	20-68	4-12 in. B.	16-3 in. Q.	July 20, 1907	1907	1907	1906 Naval Programme
Diderot	St. Nazaire, Loire	18,037	22,500	20-14	12-12 in. B.	22-5-5 in. Q.	Oct. 30, 1907	1907	1907	1906 Naval Programme
Condorcet	Penhoet, St. Nazaire	18,037	22,500	20-14	12-12 in. B.	22-5-5 in. Q.	Oct. 30, 1907	1907	1907	1906 Naval Programme
Danton	Brest Dockyard	18,037	22,500	20-18	12-9-4 in. B.	16-3 in. Q.	Aug. 23, 1908	1908	1908	1906 Naval Programme
Mirabeau	Lorient Dockyard	18,037	22,500	19-73	12-12 in. B.	22-5-5 in. Q.	Jan. 9, 1908	1908	1908	1906 Naval Programme
Vergniaud	La Gironde, Bordeaux	18,037	22,500	19-65	12-12 in. B.	22-5-5 in. Q.	May 4, 1908	1908	1908	1906 Naval Programme
Courbet	Lorient Dockyard	23,005	28,000	20-80	12-12 in. B.	22-5-5 in. Q.	Sept. 15, 1907	1907	1907	1910 Programme
Jean Bart	Brest Dockyard	23,005	28,000	23-07	12-12 in. B.	22-5-5 in. Q.	Nov. 10, 1911	1911	1911	1910 Programme
Paris	St. Nazaire, Loire	23,005	28,000	20	12-12 in. B.	22-5-5 in. Q.	Nov. 10, 1911	1911	1911	1910 Programme
Lorraine	La Seyne, Toulon	23,177	29,000	20	10-13-4 in. B.	22-5-5 in. Q.	Nov. 30, 1911	1911	1911	1912 Programme
Bretagne	Brest Dockyard	23,177	29,000	20	10-13-4 in. B.	22-5-5 in. Q.	Nov. 30, 1911	1911	1911	1912 Programme
Provence	Lorient Dockyard	23,177	29,000	20	10-13-4 in. B.	22-5-5 in. Q.	Nov. 30, 1911	1911	1911	1912 Programme
NORMANDIE	St. Nazaire, Loire	24,830	33,000	21	12-13-4 in. B.	24-5-5 in. Q.	July 22, 1912	1912	1912	1913 Programme
LANGUEDOC	La Gironde, Bordeaux	24,830	33,000	21	12-13-4 in. B.	24-5-5 in. Q.	July 22, 1912	1912	1912	1913 Programme
GASCOGNE	Lorient Dockyard	24,830	33,000	21	12-13-4 in. B.	24-5-5 in. Q.	July 22, 1912	1912	1912	1913 Programme
FLANDRE	Brest Dockyard	25,250	33,000	21	12-13-4 in. B.	24-5-5 in. Q.	July 22, 1912	1912	1912	1913 Programme
BEARN	La Seyne, Toulon	29,450	44,000	21	16-13-4 in. B.	24-5-5 in. Q.	May 1, 1913	1913	1913	1913-1914 Programme
(TOURVILLE ?)	{ Two to have been begun in Government yards and two in private yards }	29,450	44,000	21	16-13-4 in. B.	24-5-5 in. Q.	May 1, 1913	1913	1913	1913-1914 Programme
(DUPRESNE ?)		29,450	44,000	21	16-13-4 in. B.	24-5-5 in. Q.	May 1, 1913	1913	1913	1913-1914 Programme
(LYON ?)		29,450	44,000	21	16-13-4 in. B.	24-5-5 in. Q.	May 1, 1913	1913	1913	1913-1914 Programme
(LILLE ?)										
ITALY.										
Dante Alighieri	Castellamare	19,400	26,000	24-2	12-12 in. B.	20-4-7 in. Q.	June 6, 1909	1909	1909	Supplementary Construction reported to have been suspended or abandoned
Conte di Cavour	Spezia	22,340	24,000	21	13-12 in. B.	18-4-7 in. Q.	Aug. 10, 1910	1910	1910	Supplementary Construction reported to have been suspended or abandoned
Giulio-Cesare	Onorio's, Genoa	22,340	24,000	21	13-12 in. B.	18-4-7 in. Q.	July 18, 1910	1910	1910	Supplementary Construction reported to have been suspended or abandoned
Caio Duilio	Castellamare	22,340	24,000	21	13-12 in. B.	18-4-7 in. Q.	June 23, 1910	1910	1910	Supplementary Construction reported to have been suspended or abandoned
Andrea Doria	Spezia	22,340	24,000	21	13-12 in. B.	18-4-7 in. Q.	April 24, 1912	1912	1912	Supplementary Construction reported to have been suspended or abandoned
Cris. COLOMBO	Ansaldo's, Genoa	26,000	30,000	25	8-15 in. B.	16-6 in. Q.	Mar. 24, 1912	1912	1912	Supplementary Construction reported to have been suspended or abandoned
M. COLOMBO	Onorio's, Genoa	26,000	30,000	25	8-15 in. B.	16-6 in. Q.	1914 or 1915	1914	1915	Supplementary Construction reported to have been suspended or abandoned
A. CARACCILOLO	Castellamare	26,000	30,000	25	8-15 in. B.	16-6 in. Q.	Oct. 16, 1914	1914	1914	Supplementary Construction reported to have been suspended or abandoned
F. MOROSINI	Orlando's, Leghorn	26,000	30,000	25	8-15 in. B.	16-6 in. Q.	June 27, 1915	1915	1915	Supplementary Construction reported to have been suspended or abandoned
JAPAN.										
Saitama	Yokosuka	19,250	18,000 (r)	20	4-12 in. B.	8-6 in. Q.	May 15, 1905	1905	1905	1910 Programme
Kure	Kure	19,250	18,000	20	4-12 in. B.	8-6 in. Q.	May 15, 1905	1905	1905	1910 Programme
Kawachi	Kure	20,800	25,000	21-5	12-10 in. B.	10-6 in. Q.	Jan. 18, 1909	1909	1909	1911 Programme
Saito	Yokosuka	20,800	25,000	21-5	12-10 in. B.	10-6 in. Q.	Jan. 18, 1909	1909	1909	1911 Programme
Kongo	Vickers, Barrow	27,500	34,000	27	8-14 in. B.	16-6 in. Q.	Jan. 17, 1911	1911	1911	1912 Programme
Haruna	Mitsubishi Yard, Nagasaki	27,500	34,000	27	8-14 in. B.	16-6 in. Q.	Nov. 12, 1912	1912	1912	1913 Programme
Kikuma	Kawasaki Yard, Kobe	27,500	34,000	27	8-14 in. B.	16-6 in. Q.	Nov. 12, 1912	1912	1912	1913 Programme
Hiei	Yokosuka	27,500	34,000	27	8-14 in. B.	16-6 in. Q.	Nov. 12, 1912	1912	1912	1913 Programme
Kiso	Kure	20,000	25,000	22-5	12-14 in. B.	16-6 in. Q.	Nov. 4, 1911	1911	1911	1915 Programme
Tsushima	Kure	20,000	25,000	22-5	12-14 in. B.	16-6 in. Q.	Nov. 4, 1911	1911	1911	1915 Programme
YAMASHIRO	Kawasaki Yard, Kobe	20,000	25,000	22-5	12-14 in. B.	16-6 in. Q.	May 5, 1912	1912	1912	1915 Programme
HITATA	Mitsubishi Yard, Nagasaki	20,000	25,000	22-5	12-14 in. B.	16-6 in. Q.	May 5, 1912	1912	1912	1915 Programme

The World's "Dreadnoughts" (Continued).

Name.	Where Built or Building.	Displacement in Tons.	Designed S.H.P.	Speed in Knots.	Armament.		When Laid down.	When Launched.	When Commissioned for Service.	Notes.
					Main.	Secondary.				
RUSSIA.										
Sevastopol	Balti Works, St. Petersburg	23,000	42,000	23	12-12 in. B.	16-4 7/8 in. Q.	June 16, 1909	June 29, 1911	July, 1914	Possibly abandoned
Petropaulovsk	Admiralty Yard, St. Petersburg	23,000	42,000	23	12-12 in. B.	16-4 7/8 in. Q.	June 16, 1909	Sept. 9, 1911	July, 1914	
Pollava	Admiralty Yard, St. Petersburg	23,000	42,000	23	12-12 in. B.	16-4 7/8 in. Q.	June 16, 1909	July 10, 1911	July, 1914	
Gangut	Admiralty Yard, St. Petersburg	22,700	26,500	21	12-12 in. B.	20-4 7/8 in. Q.	Oct. 30, 1911	April 5, 1913	1915	
Imp. Alexander III.	Nicolaieff, Black Sea	22,700	26,500	21	12-12 in. B.	20-4 7/8 in. Q.	Sept. 1, 1912	June 6, 1914	1917	
Imp. Marie	Nicolaieff, Black Sea	23,000	26,500	21	12-12 in. B.	20-4 7/8 in. Q.	Sept. 1, 1912	June 6, 1914	1917	
Catherine II.	Galernii Island	32,200	66,000	26.5	12-14 in. B.	20-4 7/8 in. Q.	Dec. 19, 1912	—	—	
NAVARINO*	St. Petersburg	32,200	66,000	26.5	12-14 in. B.	20-4 7/8 in. Q.	Dec. 19, 1912	—	—	
ISMAIYA*	Baltic Works, St. Petersburg	32,200	66,000	26.5	12-14 in. B.	20-4 7/8 in. Q.	Dec. 19, 1912	—	—	
KINBYN*	Nicolaieff, Black Sea	32,200	66,000	26.5	12-14 in. B.	20-4 7/8 in. Q.	Dec. 19, 1912	—	—	
IVAN GROZNI	Nicolaieff, Black Sea	22,700	26,500	21	12-12 in. B.	20-4 7/8 in. Q.	Early 1914	—	—	
GERMANY.										
Nassau	Wilhelmshafen	18,600	20,000 (r)	20.7	12-11 in. B.	12-5-9 in. Q.	July 22, 1907	Mar. 7, 1908	May 3, 1910	1906 Naval Programme
Westfalen	Weser Yard, Bremen	18,600	20,000 (r)	20.4	12-11 in. B.	12-5-9 in. Q.	Aug., 1907	July 1, 1908	May 3, 1910	1906 Naval Programme
Rheinland	Vulkan Yard, Stettin	18,600	20,000 (r)	20.4	12-11 in. B.	12-5-9 in. Q.	Aug., 1907	Dec. 12, 1908	Sept. 2, 1910	1907 Naval Programme
Von der Tann*	Germania, Kiel	19,100	43,000	20.5	12-11 in. B.	10-5-9 in. Q.	Mar. 25, 1908	Sept. 20, 1909	Sept. 2, 1911	1908 Naval Programme
Ostfriesland	Blohm & Voss, Hamburg	19,100	43,000	27.23	8-11 in. B.	14-5-9 in. Q.	Oct. 19, 1908	Sept. 20, 1909	Sept. 16, 1911	1908 Naval Programme
Haigelsand	Wilhelmshafen	22,440	25,000 (r)	21.23	12-12 in. B.	14-5-9 in. Q.	Nov. 2, 1908	Sept. 26, 1909	Sept. 30, 1911	1909 Naval Programme
Thuringen	Howaldt, Kiel	22,440	25,000 (r)	21.07	12-12 in. B.	14-5-9 in. Q.	Nov. 2, 1908	Sept. 27, 1909	Sept. 31, 1912	1909 Naval Programme
Moltke*	Weser Yard, Bremen	22,440	25,000 (r)	21.07	12-12 in. B.	14-5-9 in. Q.	Nov. 2, 1908	Sept. 27, 1909	Sept. 31, 1912	1909 Naval Programme
Goeben*	Blohm & Voss, Hamburg	22,640	52,000	28.67	10-11 in. B.	12-5-9 in. Q.	Aug. 1, 1909	April 7, 1910	Aug. 28, 1912	1909 Naval Programme
Oldenburg	Schichau, Danzig	22,640	52,000	28.6	10-11 in. B.	12-5-9 in. Q.	Aug. 1, 1909	June 30, 1910	Aug. 28, 1912	1909 Naval Programme
F. der Grosse	Blohm & Voss, Hamburg	24,310	28,000	23.8	10-12 in. B.	14-5-9 in. Q.	Jan. 26, 1910	June 10, 1911	Jan. 29, 1913	1910 Naval Programme
Kaiser	Vulkan Yard, Hamburg	24,310	28,000	23.6	10-12 in. B.	14-5-9 in. Q.	Jan. 26, 1910	June 10, 1911	Jan. 29, 1913	1910 Naval Programme
Seydlitz*	Imperial Yard, Kiel	24,610	63,000	29	10-12 in. B.	12-5-9 in. Q.	Feb. 4, 1911	Mar. 22, 1912	Aug. 17, 1913	1910 Naval Programme
König Albert	Blohm & Voss, Hamburg	24,310	28,000	21	10-12 in. B.	12-5-9 in. Q.	Nov., 1910	Mar. 31, 1911	May, 1913	1910 Naval Programme
Markgraf	Howaldt, Kiel	24,310	28,000	21	10-12 in. B.	14-5-9 in. Q.	Nov., 1910	April 27, 1912	Aug. 31, 1913	1910 Naval Programme
P. Regent Luitpold	Schichau, Danzig	24,310	28,000	21	10-12 in. B.	14-5-9 in. Q.	Nov., 1910	April 27, 1912	Aug. 31, 1913	1910 Naval Programme
Grosser Kurfürst	Weser Yard, Bremen	26,575	28,000	21	10-12 in. B.	14-5-9 in. Q.	Nov., 1910	April 27, 1912	Aug. 31, 1913	1910 Naval Programme
König	Vulkan Yard, Hamburg	26,575	28,000	21	10-12 in. B.	14-5-9 in. Q.	Nov., 1910	May 5, 1913	Oct., 1914	1911 Naval Programme
Derfflinger*	Germania, Kiel	26,575	28,000	21	10-12 in. B.	14-5-9 in. Q.	Nov., 1910	June 1, 1913	Sept., 1914	1911 Naval Programme
Kronprinz	Blohm & Voss, Hamburg	26,600	70,000	27	10-12 in. B.	14-5-9 in. Q.	May, 1912	July 1, 1913	Sept., 1914	1913 Naval Programme
Luetzow*	Schichau, Danzig	28,000	28,000	26.5	8-12 in. B.	14-5-9 in. Q.	May, 1912	Feb. 2, 1914	Early 1915	1913 Naval Programme
Ex-E. Wörth	Schichau, Danzig	28,000	40,000	21	8-15 in. B.	12-5-9 in. Q.	Sept., 1913	Nov. 29, 1914	Early 1915	1913 Naval Programme
Ex-E. T.	Howaldt, Kiel	28,000	40,000	21	8-15 in. B.	16-5-9 in. Q.	Sept., 1913	End 1914	Early 1916	Purchased 1914 (ex-Greek <i>Sadamis</i> , or <i>Dashidas</i> (1913 Naval Programme)
Grat von Spee ? *	Vulkan Yard, Hamburg	19,200	40,000	23	(8-14 in. B.)	(12-6 in. Q.)	July, 1912	Nov. 11, 1914	Early 1916	1913 Naval Programme
HINDENBURG*	Wilhelmshafen	28,000	70,000	26.5	8-12 in. B.	12-5-9 in. Q.	June, 1913	July 26, 1915	1916	1913 Naval Programme

1	E. K. FRIEDRICH III.	Germany, Kiel	28,000	40,000	21	8-15 in. B.	16-5 in. Q.	1914	—	—	1914 Naval Programme	
2	H. VICTORIA LOUISE*	(Schichau, Danzig ?)	28,000	70,000	26.5	8-12 in. B.	12-5 in. Q.	1914	—	—	—	
AUSTRIA.												
—	Viribus Unitis	Stabilimento Tecnico di Trieste	20,000	25,000	21.2	12-12 in. B.	12-5 in. Q.	1910	June 24,	1911	Construction very doubtful	
—	Regenthof		20,000	25,000	20.7	12-12 in. B.	12-5 in. Q.	1910	Mar. 21,	1912		
—	Prinz Eugen	Danube Yard, Fiume	20,000	25,000	20.5	12-12 in. B.	12-5 in. Q.	1910	Nov. 30,	1912	—	
—	Svent Ivan		20,000	25,000	20.5	12-12 in. B.	12-5 in. Q.	1910	Jan. 16,	1912		
—	VIII.	Stabilimento Tecnico di Trieste	24,500	—	—	10-14 in. B.	—	1914	—	—	—	
—	IX.		24,500	—	—	10-14 in. B.	—	1914	—	—		
—	X.	Danube Yard, Fiume	24,500	—	—	10-14 in. B.	—	1915	—	—	—	
—	XI.		24,500	—	—	10-14 in. B.	—	1915	—	—		
U.S. AMERICA (Contract time for building, 30-36 months).												
1	Michigan	N.Y. Shipbuilding Co.	16,000	16,500 (r)	20.01	8-12 in. B.	22-3 in. Q.	Dec. 17,	1906	May 26,	1908	Authorised, March 3, 1905
2	South Carolina	Cramp, Philadelphia	16,000	16,500 (r)	20.52	8-12 in. B.	22-3 in. Q.	Dec. 18,	1906	July 11,	1908	March 2, 1907
3	North Dakota	Fore River Co., Quincy	20,000	25,000 (r)	22.25	10-12 in. B.	14-5 in. Q.	Nov. 11,	1907	Nov. 10,	1909	June 23, 1906
4	Dalaware	Newport News Co.	21,825	28,000	21.98	10-12 in. B.	16-5 in. Q.	Nov. 9,	1907	Feb. 6,	1909	—
5	Florida	N.Y. Government Yard	21,825	28,000	22.54	10-12 in. B.	16-5 in. Q.	Mar. 9,	1909	May 12,	1910	May 13, 1908
6	Uiah	N.Y. Shipbuilding Co.	21,825	28,000	21.92	10-12 in. B.	16-5 in. Q.	Feb. 9,	1909	May 26,	1911	—
7	Wyoming	Cramp, Philadelphia	25,000	28,000	22.04	12-12 in. B.	21-5 in. Q.	Jan. 25,	1910	May 14,	1912	—
8	Arkansas	N.Y. Shipbuilding Co.	25,000	28,000	22.04	12-12 in. B.	21-5 in. Q.	Feb. 25,	1910	May 18,	1912	—
9	Texas	N.Y. Shipbuilding Co.	27,000	28,100 (r)	22.3	10-14 in. B.	21-5 in. Q.	April 17,	1911	May 18,	1912	—
10	New York	Newport News Co.	27,000	28,100 (r)	22.3	10-14 in. B.	21-5 in. Q.	Sept. 11,	1911	May 18,	1912	—
11	Nevada	N.Y. Government Yard	27,500	28,500 (r)	20.5	10-14 in. B.	21-5 in. Q.	Oct. 26,	1912	July 11,	1914	—
12	Oklahoma	Fore River Co., Quincy	27,500	28,500 (r)	20.5	10-14 in. B.	21-5 in. Q.	Nov. 4,	1912	July 11,	1914	—
13	Nebraska	N.Y. Shipbuilding Co.	31,400	31,500 (r)	21	13-14 in. B.	22-5 in. Q.	Oct. 27,	1913	Mar. 23,	1916	—
14	ARIZONA	Newport News Co. Yard	31,400	31,500 (r)	21	13-14 in. B.	22-5 in. Q.	Mar. 2,	1914	June 20,	1915	—
15	CALIFORNIA	N.Y. Government Yard	32,000	37,000	21	13-14 in. B.	22-5 in. Q.	Oct. 14,	1915	—	—	—
16	IDAHO	N.Y. Shipbuilding Co.	32,000	37,000	21	13-14 in. B.	22-5 in. Q.	March ?	1915	—	—	—
17	MISSISSIPPI	Newport News Co.	32,000	37,000	21	13-14 in. B.	22-5 in. Q.	March ?	1915	—	—	—
18	"No. 43"	N.Y. and Mare Island	32,000	37,000	21	13-14 in. B.	22-5 in. Q.	—	1916	—	—	—
19	"No. 44"	Government Yards	32,000	37,000	21	13-14 in. B.	22-5 in. Q.	—	1916	—	—	—
ARGENTINE.												
1	MORENO	N.Y. Shipbuilding Co.	27,940	33,500	22.5	12-12 in. B.	12-6 in. Q.	July 9,	1910	Sept. 23,	1911	1915
2	Rivadavia	Fore River Co., Quincy	27,940	33,500	22.5	12-12 in. B.	12-6 in. Q.	May 25,	1910	Aug. 26,	1911	1915
BRAZIL.												
1	Minas Geraes	Elswick, Newcastle	19,250	24,500 (r)	21.43	12-12 in. B.	22-4 in. Q.	Summer, 1907	1907	Sept. 10,	1908	1910
2	São Paulo	Vickers' Barrow	19,250	24,500 (r)	21.62	12-12 in. B.	22-4 in. Q.	Summer, 1907	1907	April 20,	1909	1910
3	RIACHUELO ?	Elswick, Newcastle	30,500	45,000	21	8-15 in. B.	14-6 in. Q.	June,	1914	—	—	—
CHILI.												
1	A. COCHERANE	Elswick, Newcastle	28,000	37,000	22	10-14 in. B.	16-6 in. Q.	Jan. 22,	1913	?	1914	Autumn, 1915
SPAIN.												
1	España	Ferrol Dockyard	15,460	15,300	20	8-12 in. B.	20-4 in. Q.	Dec. 5,	1909	Feb. 5,	1912	Aug. 1913
2	Alfonso XIII.	Ferrol Dockyard	15,460	15,300	19.5	8-12 in. B.	20-4 in. Q.	Feb. 23,	1910	May 8,	1913	Summer, 1914
3	Jaimé I.	Ferrol Dockyard	15,460	15,300	19.5	8-12 in. B.	20-4 in. Q.	Feb. 5,	1912	Sept. 21,	1914	Summer, 1915

TABLE B.—THE EVOLUTION OF THE BRITISH BATTLESHIP;

DATE OF LAUNCH GIVEN.

Unarmoured Wooden Hulls Sailing Ships—Armoured Kinburn Batteries		Iron Hulls Ironclads	
Wooden Hulls Ironclads		Iron Hulls Ironclads	
Broadside, "WARRIOR," 1860		Broadside, "PRINCE CONSORT," 1863	
"NORTHUMBERLAND," 1866		"LORD WARDEN," Twin Turrets, Fore & Aft, 1865	
Central Battery, "HERCULES," 1867		"DEVASTATION," 1871	
"SULTAN," 1870		"DREADNOUGHT," 1875	
"ALEXANDRA," 1875		"CENTRAL BATTERY AND BARBETTES (TURRELS), "TÉMÉRAIRE," 1876	
"SUPERB," 1875		Soft Ends, "COLLINGWOOD," 1882	
Complete Belt, "NILE," 1888		"ROYAL SOVEREIGN," 1891	
		"MAGNIFICENT," 1894	
		"FORMIDABLE," 1898	
		"KING EDWARD VII.," 1903	
		"JORD NELSON," 1906	
		"DREADNOUGHT," 1906	
		"NEPTUNE," 1909	
		"ORION," 1910	
		"QUEEN ELIZABETH," 1913	
		"ROYAL SOVEREIGN," 1914	
		"PRINCESS ROYAL," 1911	
		"TIGER," 1913	
		"INFLEXIBLE," 1907	
		"MINOTAUR," 1906	
		"BLACK PRINCE," 1904	
		"AJAX," 1880	
		"COLLOSSUS," 1882	
		"CONQUEROR," 1881	
		"SANS PAREIL," 1887	
		"CERBERUS," 1868	
		"RUPERT," 1872	
		"MONARCH," 1868	
		"INEXHIBIBLE," 1876	
		"SCORPION," 1864	
		"EARLY COAST DEFENCE TURRET," 1864	
		"IRON HULLED IRONCLADS	

TABLE C.—THE EVOLUTION OF THE BRITISH BATTLESHIP.

Date of Launch.	Name.	No. in Class.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Length.	Beam.	Draft.	Armour.		Main Armament.	Anti-Torpedo Boat Guns.	Torpedo Tubes.	Fuel Capacity.	Weight of Single Discharge.	Energy in Foot Tons.	Cost.	Type.
										Belt.	Main Guns.								
1855/1856	Thunderbolt	8	1,673	300	5	4.8	186	48	8-5 1/4 I.	44 I.	16 Guns M.L.R.	No.	No.	nil	790	3,305	—	80,800	Armoured Battery
1860/1861	Warrior	2	9,210	4,000	12.6	14.4	380	68.3	27	44 I.	10-250 pr., 16-115 pm.M.L.R.	nil	nil	nil	—	1,250	65,734	336,683	Broadside, Iron
1864/1864	Royal Sovereign	2	5,076	2,300	12	11.1	340	62.3	23	44 I.	5-250 pr. M.L.R.	nil	nil	nil	—	1,300	18,053	123,600	Wooden Turret Ship
1865/1867	Lord Warden	2	7,840	6,700	13	13.6	360	69	28	44 1/2 I.	16-180 pr. M.L.R.	nil	nil	nil	—	2,850	47,288	135,931	Converted Broadside
1868/1870	Repluse	1	6,100	3,350	12	12.28	352	69	26	44 1/2 I.	12-180 pr. M.L.R.	nil	nil	nil	—	2,160	29,904	183,640	Last Wooden Ironclad
1868/1868	Belsham	1	7,850	4,000	12	14.17	360	66	26.5	44 1/2 I.	10-250 pr., 5-115 pr. M.L.R.	nil	nil	nil	650	3,075	45,340	183,640	First Central Battery
1868/1868	Northampton	1	7,850	4,000	12.6	14.13	360	69	27	44 1/2 I.	7-250 pr. M.L.R.	nil	nil	nil	650	3,075	45,340	183,640	Last Broadside
1868/1868	Andalus	4	6,010	3,500	12.5	13.2	380	64	26.5	44 1/2 I.	4-120 pr., 4-64 pr. M.L.R.	nil	nil	nil	500	2,756	39,658	246,482	Central Battery
1868/1869	Monarch	1	8,320	8,000	12.5	14.94	330	67.5	26.6	44 1/2 I.	4-120 pr., 3-9 in. M.L.R.	nil	nil	nil	630	3,015	37,848	354,575	Turret Ship
1868/1870	Cerberus	8	3,480	1,680	9.5	9.75	325	45	15.3	35.8 I.	8-10 I.	nil	nil	nil	120	1,600	11,152	117,556	Do., Coast Defence
1870/1871	Sultan	1	9,200	8,000	14	14.13	325	59	27.5	35.8 I.	8-10 I.	nil	nil	nil	810	4,200	56,732	357,415	Central Battery
1871/1873	Devastation	1	9,330	7,000	14	13.84	385	62.2	27.9	35.8 I.	8-10 I.	nil	nil	nil	1,800	2,800	33,468	338,468	Massless Turret Ship
1872/1874	Rupert	1	5,440	6,000	14	13.58	350	53	25.7	35.8 I.	12-14 I.	14	4	480	928	12,370	252,677	Single Turret Ship	
1875/1875	Dreadnought	1	10,820	6,500	13.5	14.92	320	63.7	26.7	35.8 I.	2-10 in. M.L.R.	20	2	1,200	3,208	65,980	592,578	Massless Turret Ship	
1875/1876	Zeidon	1	9,490	7,000	14	15	325	63.8	26.7	35.8 I.	2-10 in. M.L.R.	30	4	1,680	5,070	65,980	514,324	Central Battery	
1876/1880	Superb	1	9,170	8,500	14.5	13.71	332.2	69	26.4	35.8 I.	4-11 in. M.L.R.	31	2	620	3,740	47,358	494,969	Barbets and Cent'l Battery	
1876/1881	Indefatigable	1	11,880	6,500	12.5	14.73	320	75	26.3	35.8 I.	4-16 in. M.L.R.	21	4	1,500	6,800	129,464	433,000	Last Central Battery	
1876/1881	Conqueror	2	6,200	6,000	15.5	15.3	270	58	24	35.8 I.	4-12 in. M.L.R.	25	4	970	6,400	84,608	433,000	Last Central Battery	
1880/1883	Ajax	2	8,660	4,500	13.5	12.1	280	66	24	35.8 I.	4-12 in. M.L.R.	21	4	1,500	6,800	129,464	433,000	Single Turret Ship	
1882/1886	Colossus	2	9,420	5,500	14	14.2	325	68	25.7	35.8 I.	4-12 in. M.	20	6	650	3,408	46,344	418,433	Single Turret Ship	
1882/1886	Collingwood	5	9,500	9,500	16.5	16.5	325	68	25.7	35.8 I.	4-12 in. B.	16	2	960	3,408	38,580	418,433	Turrets on <i>Zeidon</i>	
1883/1888	Benbow	2	10,600	11,500	17.5	16.75	330	68.5	27.3	35.8 I.	4-12 in. B.	22	2	970	3,556	38,580	418,433	Turrets on <i>Zeidon</i>	
1883/1889	Nile	2	11,940	12,000	17	17	345	73	27.1	35.8 I.	4-12 in. B.	28	4	1,200	4,600	147,940	774,731	Do., <i>Zeidon</i>	
1887/1889	Sans Pareil	2	10,470	14,000	17.5	17.2	340	70	27.1	35.8 I.	4-12 in. B.	28	4	1,200	4,600	147,940	774,731	Do., <i>Zeidon</i>	
1891/1893	Hood	1	14,150	13,000	17	18	380	75	27.3	35.8 I.	4-12 in. B.	33	5	1,500	6,800	174,480	830,136	Low Free-board Turret Ship	
1891/1892	Royal Sovereign	7	14,150	13,000	17	18	380	75	27.3	35.8 I.	4-12 in. B.	33	5	1,500	6,800	174,480	830,136	Low Free-board Barbette	
1894/1895	Magnificent	9	14,900	12,500	17.5	18.9	380	75	27.3	35.8 I.	4-12 in. B.	33	5	1,500	6,800	174,480	830,136	Last Turret Ship	
1897/1900	Canopus	6	12,950	13,500	18	18.6	390	74	26.6	35.8 I.	4-12 in. B.	33	5	1,500	6,800	174,480	830,136	Barbette High Displ'mt Era	
1898/1901	Irresistible	8	14,000	15,000	18.25	18.6	390	74	26.6	35.8 I.	4-12 in. B.	33	5	1,500	6,800	174,480	830,136	Do., Light Draught	
1901/1903	Duncan	6	14,000	15,000	18	19	400	75	26.7	35.8 I.	4-12 in. B.	32	4	2,300	4,600	176,032	866,516	Do., Better Protection	
1903/1904	Swiftsure	2	11,340	12,500	18	20.1	435	78	27.3	35.8 I.	4-12 in. B.	32	4	2,300	4,600	176,032	866,516	Do., Increased Speed	
1903/1905	Dominion	2	11,340	12,500	18	20.1	435	78	27.3	35.8 I.	4-12 in. B.	32	4	2,300	4,600	176,032	866,516	Do., Complete Belt Again	
1906/1907	Lord Nelson	1	16,500	18,000	18.5	19.4	425	78	26.7	35.8 I.	4-10 in. B.	24	2	2,000	4,600	196,856	1,025,147	Do., Stronger Protection	
1906/1907	Dreadnought	2	17,500	23,000	21	22.7	500	84	27.3	35.8 I.	4-12 in. B.	24	2	2,000	4,600	196,856	1,025,147	Do., Stronger Protection	
1908/1910	St. Vincent	1	17,500	23,000	21	22.7	500	84	27.3	35.8 I.	4-12 in. B.	24	2	2,000	4,600	196,856	1,025,147	Do., Era of Mastodons	
1909/1910	Neptune	1	17,500	25,000	21	22.7	500	84	27.3	35.8 I.	4-12 in. B.	24	2	2,000	4,600	196,856	1,025,147	Do., Do.	
1909/1911	Orion	1	17,500	25,000	21	22.7	500	84	27.3	35.8 I.	4-12 in. B.	24	2	2,000	4,600	196,856	1,025,147	Do., Do.	
1913/1912	Embeth	5	27,500	33,000	25	27.5	635	92	27.5	35.8 I.	10-13.5 in. B.	20	3	3,700	8,500	684,000	1,600,000	Do., Do.	
1913/1914	O. Elizabeth	4	27,500	33,000	25	27.5	635	92	27.5	35.8 I.	10-13.5 in. B.	20	3	3,700	8,500	684,000	1,600,000	Do., Do.	
4	R. Sovereign	21	25,250	31,000	21	—	580	90.5	27.5	35.8 I.	10-13.5 in. B.	20	5	4,000	17,200	782,720	1,400,400	Do., Do.	

Notes.—I.—Iron, C.—Compound, S.—Steel, M.L.R.—Muzzle-loading Rifled, B.—Breech-loading, Q.—Quick-firing. From *Colossus* (1882) all guns are breech-loading. The original designed armaments are given. Most of the ships from the *Warrior* downwards were subsequently given both quick-firing anti-torpedo-boat guns and torpedo tubes (14 in.), whilst in several cases the main armaments were altered or rearranged. The early horse-powers are deceptive; no recognised standard having originally been followed. Cost is in every case, first cost for complete ship. Nothing under (64 pr. or 6 in. considered in computation of fire-energy or weight of metal discharged.

TABLE D.—THE EVOLUTION OF THE BRITISH ARMoured CRUISEr.

Date of Launch.	Class.	Displacement in Tons.	Designed H.P.	Designed Speed.	Best Known Speed.	Length in Feet.	Beam in Feet.	Draft in Feet.	Armament.			Torpedo Tubes.	Armour in Inches.	Protection to Big Guns.	Coal Capacity.	Complement.	Cost.	Notes as to Type.
									Main.	Secondary.	Tertiary.							
1860	Warrior	9,210	4,000	12½	14½	380	58½	27	10-250 pr. M.	16-115 pr. M.	NH	NH	4½ L.	4½ L.	730	700	356,693	Common Root of Armoured Ship
1863	Achilles	9,800	5,700	14	14½	380	58½	27-25	14-12 ton M.	2-6½ ton M.	NH	NH	4½ "	4½ "	750	700	444,606	Built as a Battleship
1876	Shannon	6,590	2,500	12	12½	260	54	23½	2-15 ton M.	7-12 ton M.	18 Machine and Light	2	8-0 "	8-0 "	580	454	287,269	First real Armoured Cruiser
1878	Northampton	7,630	5,500	12½	13½	380	60	24½	4-18 ton M.	8-12 ton M.	25 Machine and Light	4	6-0 "	6-0 "	1,150	560	393,804	Increased Armament and Speed
1883	Impérieuse	8,400	10,000	17	16½	315	62	27½	4-9½ in. B.	10-6 in. Q.C.	25 Smaller	6	10 C.	8-6 C.	1,130	537	509,500	Improved Protection, Speed and Armament
1886	Australia	5,600	8,500	18	18½	300	56	22½	2-9½ in. B.	10-6 in. Q.C.	25 Smaller	2	10 "	2-3 "	900	497	268,390	Fortress-Station Cruiser-Type
1899	Sutlej	12,000	21,000	21	22½	440	69½	26-25	2-9½ in. B.	12-6 in. Q.	12-3 in. Q., 7 Smaller	2	6 S.	3 S.	1,600	755	749,324	High Tonnage
1901	Drake	14,100	30,000	23	25½	500	71	26	2-9½ in. B.	16-6 in. B.	14-3 in. Q., 5 Smaller	2	6 "	3 "	2,500	900	1,002,977	Increased Speed and Armament
1902	Launcester	9,800	22,000	23	24½	440	66	24½	—	14-6 in. B.	8-3 in. Q., 13 Smaller	2	4 "	2 "	1,600	537	732,868	Reduced Tonnage, Armament Sacrificed
1903	Antrim	10,860	21,000	22½	23½	450	68½	25	4-7½ in. B.	6-6 in. B.	20 Smaller	2	6 "	2 "	1,800	655	906,335	Improvement on Launcester Design
1904	Black Prince	13,550	23,500	22½	23½	480	73½	27	6-9½ in. B.	10-6 in. B.	30 Smaller	3	6 "	2 "	2,000	704	1,193,414	Much heavier Armament
1905	Cochrane	13,550	23,500	22½	23½	480	73½	27	6-9½ in. B.	4-7½ in. B.	30 Smaller	3	6 "	2 "	2,000	704	1,218,244	Modification of Black Prince
1906	Minotaur	14,600	27,000	23	23½	490	74½	26	4-9½ in. B.	10-7½ in. B.	16-3 in. Q., 13 Smaller	5	6 "	1 "	2,250	755	1,438,065	Progressive Advance Towards Invincible
1907	Invincible	17,250	41,000	25	26½	530	78½	26	8-12 in. B.	—	16-4 in. Q., 5 Smaller	5	7 "	2½ "	2,500	731	1,765,995	Single Calibre, Dreadnought-Cruiser
1909	Indefatigable	18,750	43,000	26	29½	555	80	26½	8-12 in. B.	—	16-4 in. Q., 5 Smaller	2	8 "	3 "	2,500	760	1,547,426	Improvement on Invincible Design
1910	Lion	26,330	70,000	28	30½	660	86½	27½	8-12½ in. B.	—	16-4 in. Q., 5 Smaller	2	9½ "	3 "	3,500	980	1,950,000	Super-Invincible
1913	Tiger	28,000	87,500	28	—	680	87½	27½	8-13½ in. B.	12-6 in. B.	4-12 pr. Q., 8 Smaller	2	9½ "	3 "	4,000	1,120	2,563,000	Improved Lion

NOTES.—Several vessels built as battleships were subsequently placed in the armoured-cruiser class. Thus the *Northampton* (see Table B) was in her later years classed, with her sisters, as such. In the above table, original armaments are given; in all cases, quick-fire guns were added on their introduction. The gap between 1886 and 1899 is explained by the development of the large protected-cruiser from the *Blaie* to the *Argonaut*. The *Steele* is merely an armoured modification of the latter (see Table D). EXPLANATIONS.—pr. = pounder; M. = Muzzle-loader; B. = Breech-loader Q.C. = Composite Armour. Q. = Quick-fire; S. = Steel; I. = Iron; C. = Composite Armour.

TABLE E.—THE EVOLUTION OF THE BRITISH PROTECTED CRUISER.

Date of Launch.	Class.	Displacement in Tons.	Designed H.P.	Designed Speed.	Best Known Speed.	Length in Feet.	B. Beam in Feet.	Draught in Feet.	Armament.	Torpedo Tubes.	Coal Capacity.	Complement.	Notes as to Type.
1867	Polypse	1,760	1,950	12.5	12.9	212	36	16.3	12-64 pr. M.	NH	750	600	Corvette, Wooden Hull
1868	Constant	5,780	7,000	16	16.2	337.3	50-25	25.5	10-12 ton M., 6-6½ ton M., 6-20 pr. B.	NH	750	600	Iron Frigate
1869	Briton	1,860	2,150	13	13.3	220	36	17	14-64 pr. M.	NH	750	600	Corvette, Wooden Hull, Improved <i>Eclipses</i>
1869	Active	5,080	4,000	14	15	270	42	21.3	10-6 in. B., 2-84 pr. M.	NH	410	357	Iron Corvette, Ship-tugged
1872	Shan	6,260	7,000	15	16	334	52	26.5	12-12 ton M., 16-64 ton M., 8-5 in. B.	NH	410	357	Iron Frigate, Final Development
1874	Rover	3,460	4,750	14	14.68	280	43.5	23.6	12-6 in. B., 11 Smaller	3	390	—	Iron Corvette
1875	Isis	4,140	4,500	14	14.7	280	45	23.6	12-6 in. B., 4-5 in. B., 14 Smaller	2	426	—	Do. Heavier Armament
1876	Champion	2,380	3,000	17	17.98	300	46.5	22	2-64 pr. M., 4-5 in. B., 4-5 in. B.	2	570	280	Steel Dispatch Vessel
1877	Isis	2,350	2,000	12.5	13.1	225	44.5	18	2-44 ton M., 12-64 pr. M., 9 Smaller	4	470	285	Steel Corvette, Deck Protected
1878	Leander	4,300	5,000	16.5	17	300	46	20.6	10-6 in. Q.C., 4-3 pr. Q., 12 Smaller	2	1,000	297	Second-class Cruiser
1882	Rapid	1,420	1,400	13	13.1	200	38	13.6	2-6 in. B., 10-9 in. B., 5 Smaller	NH	400	150	Composite Corvette
1884	Calliope	1,770	4,000	13.75	14.6	235	44.5	20	4-6 in. B., 12-8 in. B., 12 Smaller	2	550	291	Steel Corvette
1884	Archer	2,770	3,500	16.5	17	225	38	14.5	2-8 in. B., 11 Smaller	2	475	172	Steel Torpedo-Cruiser
1885	Thames	1,580	3,200	17	18	300	46	19.5	4-5 in. B., 12 Smaller	2	900	156	Second-class Cruiser
1886	Fearless	4,050	5,700	17	19.9	300	46	19.5	6-6 in. Q.C., 9-6 pr. Q., 5 Smaller	2	400	210	Third-class Cruiser
1888	Medea	2,800	9,000	19	20	280	35	13.2	6-4 in. Q., 6 Smaller	2	450	156	Do. do.
1889	Barham	1,830	4,700	19	20	280	35	13.2	2-9-2 in. B., 10-6 in. Q., 25 Smaller	2	1,800	590	First-class Cruiser
1889	Blake	9,000	20,000	21	21.5	375	65	16.5	8-4 in. Q., 13 Smaller	2	1,440	610	Third Class, Improved <i>Barham</i> Type
1890	Philomel	2,575	7,500	19	20.97	360	60	16.5	2-9-2 in. Q., 10-6 in. Q., 25 Smaller	2	1,800	590	Third Class, Modification of <i>Blake</i> Type
1890	Edgar	7,350	12,000	19.5	20.97	360	60	16.5	2-9-2 in. Q., 10-6 in. Q., 25 Smaller	2	1,800	590	Second Class, Naval Defence Act
1891	Apollo	3,400	9,000	20	20.4	300	43	16.6	2-6 in. Q., 6-4 in. Q., 19 Smaller	2	1,950	544	Do. Improved <i>Asiatic</i> Type
1891	Astrea	4,360	9,000	19.5	19.74	320	49.5	19	2-6 in. Q., 8-4 in. Q., 17 Smaller	2	1,950	544	Do. All 4.7 in. Q., later replaced by 6 in. Q.
1894	Eclipse	5,600	9,600	19.5	20.1	350	53	20.25	2-9-2 in. Q., 12-6 in. Q., 32 Smaller	2	1,950	477	Do. All 4.7 in. Q., later replaced by 6 in. Q.
1896	Terrible	14,200	25,000	22	22.5	500	71	27	2-9-2 in. Q., 12-6 in. Q., 32 Smaller	2	3,000	840	First Class, four more 6 in. Q. added later
1896	Pelorus	2,135	7,000	20	20.7	300	36.5	17	8-4 in. Q., 6-4 in. Q., 16 Smaller	2	1,375	434	Third-class Cruiser
1896	Arrogant	5,750	10,000	19	19.9	320	57.5	21	4-6 in. Q., 6-4 in. Q., 16 Smaller	2	1,175	480	Second Class, 4.7 in. Q. later replaced by 6 in. Q.
1897	Hycanth	5,600	10,000	20	20.9	350	64	20.6	11-6 in. Q., 9-3 in. Q., 16 Smaller	2	1,000	477	Do.
1898	Arrogant	11,000	18,000	20.75	21.32	455	69	25.25	16-6 in. Q., 12-3 in. Q., 16 Smaller	2	2,000	677	First Class, Modified <i>Terrible</i> Type
1902	Encounter	5,880	12,800	21	21.1	365	66	20.25	11-6 in. Q., 8-3 in. Q., 9 Smaller	2	1,225	512	Second Class. Better Speed than <i>Hermes</i>
1903	Amethyst	3,000	9,800	21.75	23.63	360	40	14.5	12-3 in. Q., 10 Smaller	2	300	295	Third Class. Better Speed than <i>Pelorus</i>
1904	Attentive	2,940	16,000	25	26.28	374	38-25	13.5	10-4 in. Q., 8 Smaller	2	450	268	Scout. Weak Armament and High Speed
1905	Boadicea	3,300	18,000	25	27.9	385	41	13.5	6-4 in. Q., 8 Smaller	2	450	295	Do. Slightly Increased Tonnage
1906	Blonde	3,360	18,000	25	28.8	385	41.5	13.5	10-4 in. Q., 8 Smaller	2	450	295	Do. More Powerful Armament
1909	Bristol	4,830	22,000	25	26.84	430	47	15.25	2-6 in. Q., 10-4 in. Q., 8 Smaller	2	550	376	Do. Better Sea-keeping Powers
1913	Birmingham	5,440	25,000	24.75	27.4	430	49.5	16.7	9-6 in. Q., 4 Smaller, 4 Machine	2	1,000	380	Do. More Powerful Armament
1913	Arethusa	8,560	31,000	29	27.4	410	41	13.5	2-6 in. Q., 6-4 in. Q., 8 Smaller	2	750	400	Do. All oil-fuel, Higher Speed
1914	Cordelia	8,750	33,000	29	—	420	42.8	13.5	2-6 in. Q., 5-4 in. Q., 8 Smaller	4	750	410	Do. Do. Larger Tonnage

EXPLANATIONS.—M. = Muzzle-loader; B. = Breech-loader; Q.C. = Breech-loaders converted to Quick-firers; Q. = Quick-firer. In tracing the evolution of protected cruisers it was found impossible to maintain the sequence of the different classes. Thus a vessel built as a second-class cruiser might well be reckoned third-class after a lapse of ten years.

TABLE F.—THE EVOLUTION OF BRITISH TORPEDO-CRAFT.

Date of Launch.	Class.	Type.	Displacement in Tons.	Designed H.P.	Designed Speed.	Best Known Speed.	Length in Feet.	Beam in Feet.	Draught in Feet.	Gun Armament.	No. of Torpedo Tubes.	Complement.	Descriptive Notes.	Fuel Capacity in Tons.
1877	Lightning	T.B. *	27	460	18	19	84.5	10.8	5	Nil	1	15	First Torpedo-boat	7
1882	No. 74	"	47	500	17	16.5	60	7.5	3.6	1 Machine	1	7	Early 2nd Class Type	1
1885	Rattlesnake	T.G.B.	40	170	17	16.5	100	12.5	5	2 Machine	1	15	Increased Armament and Tonnage	10
1886	No. 039	T.G.B.	550	2,700	18.5	19.8	200	22.5	8.5	1.4 in. Q., 4.3 pr. Q., 1 M.	2	67	First Torpedo-gunboat	100
1886	No. 041	T.G.B.	60	700	20	21	127.5	12.5	8.5	2.3 pr. Q.	4	15	Increased general war-value	100
1889	Seagull	T.G.B.	735	3,500	19	23	230	27	8.25	2.4.7 in. Q., 4.3 pr. Q., 1 M.	3	91	Improved Torpedo-gunboat	100
1889	No. 080	T.B.	85	1,100	22	23	130	13.5	6.5	3.3 pr. Q.	3	19	Increased general war-value	100
1892	Leda	T.G.B.	810	5,500	19.25	21.8	230	27	8.75	2.4.7 in. Q., 4.3 pr. Q., 1 M.	3	91	Improved Torpedo-gunboat	57
1893	Havock	T.B.D.	240	3,500	26.5	26.77	180	18.5	5.25	1.12 pr. Q., 3.6 pr. Q.	1	43	First Torpedo-boat Destroyer	25
1894	No. 091	T.B.	130	2,400	23.5	24	140	15.5	7.5	3.3 pr. Q.	3	18	Developed Torpedo-boat	100
1894	Halcyon	T.G.B.	1,070	6,000	19.5	—	250	30.5	7.3	2.4.7 in. Q., 4.6 pr. Q., 1 M.	5	115	Final Type of Torpedo-gunboat	60
1894	Ardent	T.B.D.	265	4,500	27	27.97	201	19	5.6	1.12 pr. Q., 5.6 pr. Q.	2	45	More Speed and Armament	80
1896	Brzen	"	345	6,000	30	29.66	218	20	8.5	do.	2	60	do. Experimental	100
1898	Albatross	"	430	7,500	31	31.55	227.6	21.25	8.5	do.	2	66	First Turbine-driven Destroyer	88
1898	Viper	"	312	10,000	31	37.11	210	21	8.2	do.	2	62	Improved Turbine Destroyer	107
1899	Cobra	"	400	11,500	31	36.63	223	20.5	8.5	do.	2	68	Larger Torpedo-boat; More Speed	20
1900	No. 098	T.B.	178	9,850	25	—	160	17	8.4	3.3 pr. Q.	3	18	Impr. Albatross Type. Experimental	100
1901	Arab	T.B.D.	470	8,500	31	31	218	20	5.6	1.12 pr. Q., 5.6 pr. Q.	2	32	Large Torpedo-boat	42
1902	No. 109	T.B.	200	2,900	25	—	166	17.25	8.4	3.3 pr. Q.	2	32	Turbine-destr. Stronger Scantling	130
1902	Velox	T.B.D.	440	8,000	27	27.12	210	23	8.5	1.12 pr. Q., 5.6 pr. Q.	2	63	High Inge. and Sea-keeping Qualities	130
1903	Waveney	"	534	7,000	25	25.62	220	23.5	10	4.12 pr. Q.	2	70	As Waveney, but Turbine-driven	130
1903	Eden	"	540	7,000	25	26.22	220	23	8.75	do.	2	72	Final Type of Non-Turbine Craft	126
1905	Garry	"	590	7,500	25.5	26.51	222	23.5	9.6	do.	2	35	Turbine-driven Torpedo-boat	20 + Oil
1906	No. 6	C.T.B.	647	3,750	26	27.5	168.5	17.5	5.8	2.12 pr. Q.	2	68	Ocean-going Destroyer	90 Oil
1906	Mohawk	O.D.	765	14,500	33	35.29	270	25	8.9	5.12 pr. Q.	2	150	do. Experimental	180 Oil
1907	Swift	F.L.	2,170	30,000	36	38.3	345	34.5	10.5	4.4 in. Q.	2	35	Final Development in Torpedo-boats	27 + Oil
1908	No. 31	C.T.B.	280	4,000	26	27.5	178.5	18.6	5.9	2.12 pr. Q.	3	71	Improved Mohawk	103 Oil
1908	Amazon	O.D.	890	15,500	33	36.8	280	26.5	8.25	2.4 in. Q.	2	96	Better Sea Qualities; Less Speed	120 Coal
1909	Scourge	O.D.	925	12,500	27	27.98	268.7	28	8.6	1.4 in. Q., 3.12 pr. Q.	2	76	do.	85 Oil
1910	Acorn	O.D.	780	13,000	27	35.34	240	25.25	7.9	3.4 in. Q.	2	100	Higher Speed again	140 Oil
1912	Acasta	O.D.	935	24,500	32	32.3	260	27	9.3	3.4 in. Q.	2	100	Lower Speed and Higher Tonnage	200 Oil
1913	Laertes	O.D.	965	24,500	29	31.2	260	27	9.4	3.4 in. Q.	4	100	Flotilla Leader	—
1914	Nimrod	F.L.	1,900	29,000	32	—	—	—	—	6.4 in. Q.	6	—	—	—

Notes.—T.B. = Torpedo-boat; T.G.B. = Torpedo-gunboat; T.B.D. = Torpedo-boat Destroyer; C.T.B. = Coastal Torpedo-boat; O.D. = Ocean-going Destroyer, F.L. = Flotilla Leader.

TABLE G.—SITUATION OF NAVAL POWERS IN MARCH, 1916, IN SHIPS BUILT,
BUILDING, AND PROJECTED.

TEMPORARILY SUSPENDED.

TABLE H.—COMPARATIVE TABLE OF SUPER-DREADNOUGHTS.

Nationality.	Type.	Displacement in Tons.	Designed H.P.	Designed Speed.	Highest Speed.	Armament.	Torpedo Tubes	Armour in inches.				Year of Launch.
								A	B	C	D	
British Empire	Orion	22,500	27,000	21	23.13	{ 10-13.5 in. 16.4 in. Q., 6 Machine	0 3	12	2½	10	8-12	1910
	Iron Duke	25,000	29,000	21	—	{ 10-13.5 in. 12.6 in. Q., 6 Machine	0 5	12	2½	10	8-12	1912
	Q. Elizabeth	27,500	58,000	25	—	{ 8-15 in. 16.6 in. Q., 4.3 in. Q.	0 5	13½	3	10	8-13½	1913
	Royal Sov'n	25,250	31,000	21	—	{ 8-15 in. 16.6 in. Q.	0 5	13½	3½	—	13½	1914
Brazil	Riachuelo	30,500	45,000	21	—	{ 8-15 in. 14.6 in. Q. 10.4 in. Q.	0 2	13½	—	—	—	?
	A. Cochrane	28,000	37,000	22	—	{ 10-14 in. 16.6 in. Q.	0 4	11	3	8-11	11	1913
France	Lorraine	23,177	29,250	20	—	{ 10-13.4 in. 22-5.5 in. Q., 8 Smaller	0 4	11	2½	10½	7	1913
	Normandie	24,830	33,000	21	—	{ 12-13.4 in. 24-5.5 in. Q., 8 Smaller	0 4	12½	2½	8	9-17	1914
	Tourville	29,450	44,000	21	—	{ 16-13.4 in. 24-5.5 in. Q.	0 6	14	—	—	9-18	?
Germany	Ex. "T"	28,000	40,000	21	—	{ 8-15 in. 16-5.9 in. Q., 12-3.4 in. Q.	0 5	13	3	8	13	1914
Italy	F. Morosini	26,000	50,000	25	—	{ 8-15 in. 16-6 in. Q.	0 4	11	2½	8	10-12	1915
Japan	Fuso	30,000	45,000	22.5	—	{ 12-14 in. 16-6 in. Q.	0 5	9	3	8	8-12	1913
U. S. A.	Texas	27,000	28,100	20.5	22.3	{ 10-14 in. 21-5 in. Q., 4 Smaller Q.	0 4	12	3	8-10	8-11	1912
	Pennsylvania	31,400	34,500	21	—	{ 12-14 in. 22-5 in. Q., 4 Smaller Q.	0 4	13½	3	nil.	9-18	1914
	California	32,000	37,000	21	—	{ 12-14 in. 22-5 in. Q.	0 4	14	3	nil.	9-18	1916

NOTE.—All ships have turbine engines.

TABLE I.—COMPARATIVE TABLE OF CONTEMPORARY BATTLESHIPS (DREADNOUGHT TYPE).

Nationality.	Type.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Highest Speed.	Armament.	Torpedo Tubes.	Armour in inches.				Year of Launch.
								A	B	C	D	
British Empire	Dreadnought (1)	17,900	23,000 (T)	21	22.7	{ 10-12 in. 29 Small Q.	{ 0 5 0	11	2½	11	{ 8- 11	{ 1906 1907
	St. Vincent	19,350	24,500 (T)	21	23.4	{ 10-12 in., 16-4 in. Q. 6 Smaller Q.	{ 3 0	9½	2½	9½	{ 8- 12	{ 1908 1909
	Colossus	20,000	25,000 (T)	21	22.7	10-12 in., 16-4 in. Q.	{ 3 0	11	2½	9½	{ 8- 12	1910
	Agin-court	27,500	45,000 (T)	22	—	{ 14-12 in. 20-6 in. Q. 12 Smaller	{ 3 0	9	2½	9	9	1913
Argentine	Moreno	27,940	39,500 (T)	23.5	—	{ 12-12 in., 12-6 in. Q. 12-4 in. Q.	{ 4 0	10	2½	8	10	1911
Austria	Viribus Unitis	20,000	25,000 (T)	20	21.2	{ 12-12 in., 12-5.9 in. Q. 22 Smaller Q.	{ 4 0	11	1½	8	12	{ 1911 1912
Brazil	São Paulo	19,250	24,500	21	21.6	{ 12-12 in., 22-4.7 in. Q. 8 Smaller Q.	{ 4 0	9	2½	9	9	{ 1908 1909
France	Danton	18,027	22,500 (T)	19.3	20.66	{ 4-12 in., 12-9.4 in. 24 Small Q.	{ 2 0	10	3	7.8	{ 9- 12	{ 1909 1910
	Jean Bart	23,095	28,000 (T)	20	23.07	{ 12-12 in., 22-5.5 in. Q. 8 Small Q.	{ 4 0	10½	3	7	{ 9- 12	{ 1911 1912
Germany	Nassau	18,600	20,000	19.5	20.7	{ 12-11 in., 12-5.9 in. Q. 20 Smaller Q.	{ 6 0	4-9½	4	8	11	1908
	Ostfriesland	22,440	25,000	20.5	22.2	{ 12-12 in., 14-5.9 in. Q. 16 Smaller Q.	{ 6 0	4-11	4	8	11	{ 1909 1910
	Kaiser	24,310	28,000 (T)	21	23.6	{ 10-12 in. 14-5.9 in. Q. 16 Smaller Q.	{ 5 0	11	3	8	11	{ 1911 1912
	König	26,675	28,000 (T)	21	—	{ 10-12 in. 14-5.9 in. Q. 12 Smaller	{ 5 1	13½	3	7-7	13½	1913
Italy	Dante Alighieri	19,400	26,000 (T)	22	24.2	{ 12-12 in., 20-4.7 in. Q. 16-14 pr. Q.	{ 2 1	10	2½	8	12	1910
	Giulio Cesare	22,340	24,000 (T)	21	—	{ 13-12 in., 18-4.7 in. Q. 18-14 pr. Q.	{ 2 0	10	2½	8	12	1911
Japan	Aki (2)	19,780	24,000 (T)	20	20.23	{ 4-12 in., 12-10 in. 8-6 in. Q., 12 Smaller Q.	{ 5 0	9	3	8	8- 12	1907
	Kawachi	20,800	26,500 (T)	20.5	21.5	{ 12-12 in., 10-6 in. Q. 12-4.7 in. Q., 8 Smaller Q.	{ 5 0	12	2½	9	9	1910
Russia	Sevastopol	23,000	42,000 (T)	23	—	{ 12-12 in., 16-4.7 in. Q. 8 Smaller Q.	{ 4 0	4-11	3	8	10- 12	1911
	Imp. Maria	22,700	26,500 (T)	21	—	{ 12-12 in. 20-4.7 in. Q. 8 Smaller	{ 4 0	12	3	8	10- 12	1913
U.S. America	Michigan	16,000	16,500	18.5	20.52	8-12 in., 38 Small Q.	{ 4 0	9-11	3	8- 10	8- 10	1908
	Delaware (3)	20,000	25,000	21	22.25	{ 10-12 in., 14-5 in. Q. 4 Smaller Q.	{ 2 0	11	3	5- 10	8- 12	{ 1908 1910
	Wyoming	26,000	28,000 (T)	20.5	22.04	{ 12-12 in., 21-5 in. Q. 4 Smaller Q.	{ 2 0	11	3	8- 10	8- 10	1911

(1) *Dreadnought's* three sisters displace 18,600 tons, and carry 16-4 in. Q. in place of the 3 in. Q. They have only three torpedo-tubes.

(2) *Aki's* sister-ship, *Satsuma*, is slightly different; see Ship Tables.

(3) *Delaware* alone has reciprocating engines; remainder driven by turbines. For other differences see Tables.

TABLE J.—COMPARATIVE TABLE OF CONTEMPORARY ARMoured AND BATTLE-CRUISERS.

Nationality.	Type.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Highest Speed.	Armament.	Torpedo Tubes.	Armour in inches.				Year of Launch.
								A	B	C	D	
British Empire	Minotaur	14,600	27,000	23	23.4	{ 4-9.2 in., 10-7.5 in. Q. 21 Smaller Q. }	0 5 0	6	1	6	8	1906
	Invincible	17,250	41,000 (T)	25	28.7	{ 8-12 in., 16-4 in. Q. 5 Smaller Q. }	5 0	7	2½	7	10	1907
	Indefatigable	18,750	43,000 (T)	26	29.13		0 2	7	2½	8	10	1909
	Princess Royal	26,350	70,000 (T)	28	32.7	{ 8-13.5 in., 16-4 in. Q. 6 Smaller Q. }	0 2	9½	3	7	10	1911
	Tiger	28,000	87,500 (T)	28	—	{ 8-13.5 in., 12-6 in. Q. 4 Smaller Q. }	0 2	9½	3	7	10	1913
France	E. Quinet	13,780	36,000	23.5	23.92	14-7.6 in. Q., 26 Smaller Q.	0 2	6½	2½	3-5	8	1907
Germany	Von der Tann	19,100	44,000 (T)	25	28.13	{ 8-11 in., 10-5.9 in. Q. 16-3.4 in. Q. }	0 4 0	4-6	2½	5-6	8	1909
	Moltke	22,640	50,000 (T)	25.5	28.57	{ 10-11 in., 12-5.9 in. Q. 12-3.4 in. Q. }	0 4 0	4-8	2½	5-6	10	1910
	Luetzow	28,000	70,000 (T)	26.5	—	{ 8-12 in., 12-5.9 in. Q. 12 Smaller Q. }	0 4	7	—	10	—	1913
Italy	San Giorgio (2)	9,832	18,000	22.5	24.04	{ 4-10 in., 8-7.5 in. Q. 18 Smaller Q. }	0 3	8	1½	7	7	1908
Japan	Tsukuba	13,750	20,500	20.5	24	{ 4-12 in., 12-6 in. Q. 12-4.7 in. Q., 8 Smaller Q. }	0 3	7	2	5	7	{ 1905 1906
	Ibuki (1)	14,600	24,000 (T)	22.5	22.17	{ 4-12 in., 8-8 in. Q. 14-4.7 in. Q., 11 Smaller Q. }	0 3	—	—	—	—	—
	Kongo	27,500	64,000 (T)	27	—	{ 8-14 in., 16-6 in. Q. 5 Machine }	0 8	10	2	7	9½	1912
Russia	Rurik	15,170	19,730	21	21.425	{ 4-10 in., 8-8 in. Q. 20-4.7 in. Q. 18 Smaller Q. }	0 2	6	1½	3	8	1906
	Borodino	32,200	66,000 (T)	26.5	—	{ 12-14 in. B. 20-4.7 in. Q., 8 Smaller }	0 4	9½	2½	7	9½	1914
U.S. America	Colorado	13,680	23,000	22	23.13	{ 4-8 in. Q., 14-6 in. Q. 48 Smaller Q. }	0 2	6	4	5	4-6	1903
	Tennessee	14,500	25,000	22	22.8	{ 4-10 in., 16-6 in. Q. 48 Smaller Q. }	0 4	5	3	5	5-9	1904

(1) *Ibuki's* sister ship, *Kurama*, has reciprocating engines.

(2) *San Marco* has turbine engines, and 20,000 I.H.P.

TABLE K.—COMPARATIVE TABLE OF CONTEMPORARY LIGHT CRUISERS.

Nationality.	Type.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Highest Speed.	Armament.	Torpedo Tubes.	Coal Capacity.	Year of Launch.
British Empire	Boadicea (1)	3,300	18,000 (T)	25 kts.	28.8	6-4 in. Q., 8 Smaller Q.	3 0	450 600	1908 1910
	Bristol	4,820	22,000 (T)	25	26.84	2-6 in. Q., 10-4 in. Q. 4 Smaller Q.	0 3	600 850	1909
	Birmingham	5,440	25,000 (T)	24.75	27.4	9-6 in. Q., 4 Smaller Q. 2 Machine	0 3	750 1000	1913
	Arethusa	3,560	31,000 (T)	29	—	2-6 in. Q., 6-4 in. Q. and Smaller Q.	4 0	750 Oil	1913
	Cordelia	3,750	33,000 (T)	29	—	2-6 in. Q., 8-4 in. Q. and Smaller Q.	4 0	750 Oil	1914
Austria	Admiral Spaun	3,500	20,000 (T)	26	27.07	7-3.9 in. Q., 2 Smaller Q.	0 3	450 850	1909
Brazil	Bahia	3,000	18,000 (T)	26.5	27.412	10-4.7 in. Q., 6 Smaller Q.	2 0	650	1908
France	—	4,500	32,000 (T)	28- 30	—	6 or 8 5.5 in. Q., and Smaller	—	Oil	1915
Germany	Augsburg	4,281	19,600 (T)	25.5	27.73	12-4.1 in. Q., 2 Smaller Q.	0 2	400 900	1909 1910
	Rostock	4,900	26,000 (T)	27	—	12-4.1 in. Q., and some anti-aero guns	0 2	450 1300	1912
Italy	Quarto	3,300	22,500 (T)	29	29.5	6-4.7 in. Q., 6-3 in. Q.	2 0	450 800	1911
Japan	Tone	4,035	15,000	23	—	2-6 in. Q., 10-4.7 in. Q. 2-3 in. Q., 2 Machine	0 3	750 1000	1907
	Yahagi	4,950	22,500 (T)	26	—	6-6 in. Q., 4-3 in. Q. 4 Machine	0 2	600 850	1911
Peru	Almirante Grau	3,200	14,000	24	24.64	2-6 in. Q., 8-3 in. Q., 8 Smaller Q.	0 2	500	1906
Russia	Svietlana	7,500	— (T)	30	—	15 or 16-4.7 in. Q. 5 Smaller Q.	—	—	—
Spain	—	5,600	25,500 (T)	26	—	9-6 in. Q. 4 Smaller Q.	0 2	—	1916
U.S. America	Salem	3,750	16,000 (T)	24	27.7	2-5 in. Q., 8-3 in. Q.	0 2	475 1250	1907

(1) *Boadicea's* sister ships are slightly different. See Tables.

TABLE L.—COMPARATIVE TABLE OF
CONTEMPORARY DESTROYERS.

Nationality.	Type.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Highest Speed.	Armament.	Torpedo Tubes.	Year of Launch.
British Empire	Acorn	780	13,500	27	35.34	2-4 in. Q., 2-12 pr. Q.	2	1910
	Acasta	920	24,500	32	—	3-4 in. Q., and Smaller	4	1912
	Laertes	965	24,500	29	31.2	3-4 in. Q.	4	1913
	Markham	1,900	29,000	32	—	6-4 in. Q.	6	1914
Argen- tine	Catamarca	1,010	20,000	32	—	4-4 in. Q.	4	1911
Austria	Balaton	800	17,000	32.5	—	2-3.9 in. Q., 4-12 pr. Q.	2	'12-'13
Brazil	Para	550	8,000	27	28.73	2-4 in. Q., 4-3 pr. Q.	2	'08-'10
Chili	Condell	1,800	27,000	31	31.85	6-4 in. Q., 2 Machine	3	'12-'13
France	Bouclier	692	13,000	31	35.6	2-4 in. Q., 4-9 pr. Q.	4	'10-'11
	Magon	851	16,000	30	—	2-3.9 in. Q.	4	1913
	E. Gabolde	905	20,000	31	—	4-9 pr. Q.	6	1914
Germany	G174-V185	626	16,000	32½	35.4	2-23 pr. Q., 2 Machine	3	'09-'10
	VI-G12	640	23,000	32½	34.28	2-23 pr. Q., 2 Machine	5	1912
Italy	Impavido	613	15,000	30	35.10	1-4.7 in. Q., 4-12 pr. Q.	2	'11-'12
	F. Nullo	700	18,000	30	—	1-4.7 in. Q., 4-12 pr. Q.	2	1914
	G. Pepe	1,028	—	32	—	2-4.7 in. Q., 6-12 pr. Q.	4	1914
Japan	Sakura	790	18,600	33	—	2-4 in. Q., 4-12 pr. Q.	2	'11-'12
	Umikaze	1,150	20,500	33	33.46	1-4.7 in. Q., 5-12 pr. Q.	3	'10-'11
	Kawakaze	955	24,000	35	—	2-4.7 or 4 in. Q. 5-12 pr. Q.	3	1914
Portugal	Guadiana	670	11,000	28	30.3	1-4 in. Q., 2-12 pr. Q.	2	1913
Russia	Novik	1,260	30,000	35	36.25	4-4 in. Q., 4 Machine	8	1911
	Lieut. Iljin	1,350	36,000	36	—	3-4 in. Q., 4 Machine	10	?
U.S. America	Drayton	742	13,000	29½	33.94	5-14 pr. Q., 2 Machine	3	1910
	Aylwin	1,040	16,000	29½	32.37	5-4 in. Q., 2 Machine	6	'12-'13
	Conyngham	1,050	—	29½	—	4-4 in. Q.	8	1914
	Shaw	1,125	—	29½	—	2-3 pr. Q. (anti-aero)	12	1916

NOTE.—This table is now limited to destroyers launched since 1909. All have turbine engines.

TABLE M.—COMPARATIVE TABLE OF
CONTEMPORARY SUBMARINE VESSELS.

Nationality.	Class.	Surface Tonnage.	Submerged Tonnage.	Surface I.H.P.	Surface Speed.	Submerged I.H.P.	Submerged Speed.	Length in Feet.	Beam or Diameter.	Number of Torpedo Tubes or Apparatus.	Year of Launch.	Notes as to Type.
British Empire	No. B 1.	276	314	600	13	190	9	135	13.5	2	1904	Vickers-Maxim Type
"	" C 1.	290	321	600	14	300	10	135	13.5	2	1906	do. do.
"	" D 1.	540	595	1,200	16	550	10	153	17.5	3	1908	Admiralty Type
"	" E 1.*	700	812	1,750	16	600	10	178	23	4	1910	do. do.
"	V 1.*	750	1,050	—	19	—	10	200	20	4	1914	Vickers Type
"	Swordfish*	950	1,200	5,000	20	—	12	215	—	2	1914	Admiralty "F" Type
Japan	No. 12	290	325	600	14	300	10	135	13.5	2	1908	Vickers-Maxim Type
"	" 15*	460	665	—	17	—	10	187	—	2	1914	Laubeuf Type "Dc"
U.S.A.	D 1	278	340	600	12	300	10	135	13.8	4	1909	Holland Type
"	F 2	400	435	730	14	300	10	145	—	4	1910	" "
"	G 1	400	500	1,030	14	300	9½	160.7	13	4	1909	Lake Type
"	K 1*	390	530	950	14½	—	10½	147	15.5	4	1914	Holland Type
"	L 5*	450	575	1,200	14½	—	11	174	—	4	1915	Lake Type
"	Schley*	1,100	1,500	4,000	20	—	12	265	23	10	1916	Holland Type
France	Émeraude	383	443	600	12	200	9	154.25	12.6	6	1906	Maugas Type
"	Circé	344	490	440	11½	300	8	154.5	16	6	1907	Laubeuf Type
"	Pluviôse	391	550	700	12	440	8	167.3	16.3	6	1907	do. do.
"	Archimède	577	810	1,700	15	—	8	201.75	18.75	7	1909	Hutter Type
"	Bourgeois	555	735	1,560	12½	—	8	181	26.25	7	1910	Bordelle Type
"	Gustave Zédé*	740	970	3,000	17	3,000	12	239.5	19.6	8	1913	Hutter Type
"	Amphitrite*	414	550	1,300	15	—	9½	177	16.75	8	1914	Caverley Type
"	Belfone*	590	600	1,800	17	—	10	198	17.7	8	1914	Maugas Type
"	Diane*	680	—	1,800	18½	—	11	223	18	10	1915	Simonet Type
"	Sané*	833	1,070	—	19	1,700	12	246	20.1	8-10	1915	Maugas Type
Russia	Alligator	450	500	1,000	15	—	6½	124.6	14	4	1908	Lake Type
"	Akula	360	400	—	12	—	8	118	12	2	1908	Bubnov Type
Germany	U-(21 ?)*	800	900	1,800	15½	900	8½	215	21	4	1913	{ Marine-Amt and Krupp design }
"	U-(36 ?)*	—	1,040	4,000	20	—	9	—	—	6	1914	{ Krupp design Cavallini Type }
Italy	G. Ferrario	394	470	1,500	15	—	9	139	13.8	6	1913	{ Admiralty and Laurenti design }
"	Galvani*	700	1,070	—	18*	—	—	196	21.3	5	1915	{ Admiralty and Laurenti design }
Austria	U-3	287	300	600	12	320	8	142	12.5	2	1908	Germania Type

Boats marked * are armed with one or two Q.F. Guns.

NOTE.—Details given of German submarines are only approximate.

Above Table is now limited to submarines of 300 tons submerged displacement and over.

TABLE N.

Relative Position in Completed Capital Ships of less than twenty years of age and displacing 6,000 tons and over.

TABLE O.
Capital Ships Built
or Ordered.

TEMPORARILY SUSPENDED.

TABLE P.

Relative Position in Completed Cruisers of less than fifteen years of age and displacing over 6,000 tons.

TEMPORARILY SUSPENDED.

TABLE Q.—Relative Position in Completed Light Cruisers of less than fifteen years of age and displacing over 2,000 tons.

TEMPORARILY SUSPENDED.

TABLE R.—Relative Position in Completed Destroyers of less than eleven years of age.

TEMPORARILY SUSPENDED.

TABLE S.—Relative Position in Completed Submarine Craft of less than eleven years of age.

TEMPORARILY SUSPENDED.

TABLE T.—Summary of foregoing Tables. Relative Positions of Fleets
in March 1915.

TEMPORARILY SUSPENDED.

TABLE U.—Summary of foregoing Tables. Relative Positions of Fleets
in March 1916.

TEMPORARILY SUSPENDED.

TABLE V.—TYPES OF MODERN NAVAL ORDNANCE.

(BRITISH ORDNANCE OVER 12-in. CALIBRE
TEMPORARILY SUSPENDED)

Calibre in Inches.	Nationality.	Description.	Weight in Tons.	Total Length in Inches.	Length in Calibres.	Weight of Projectile in lbs.	Muzzle Velocity ft. Seconds.	Muzzle Energy in Foot- Tons.
18	American	Bethlehem	60	480	30	2,075	2,150	66,400
16 (1)	German	Krupp	100.1	761.3	45	2,028	2,920	119,850
14	American	Bethlehem	70.3	—	45	1,400	2,500	60,850
14 (2)	"	Navy Dep.	63.1	642	45	1,400	2,400	65,806
13	"	"	61.4	479	35	1,130	2,000	31,333
15.7	French	Schneider-Canet	102.5	—	45	2,183	2,493	94,287
14.5	"	"	83.6	—	45	1,719	2,575	79,272
13.4	"	"	66.3	—	45	1,332	2,675	65,338
15 (1)	German	Krupp	90.7	—	45	1,653.2	2,937	98,310
14	"	"	74	628.97	45	1,368.8	2,916	80,597
13.5	"	"	66.7	—	45	1,212.5	2,939	72,671
15	Italian	Vickers Model	102	—	45	1,653.5	2,450	—
12 inch to 12.01 inch. Main Battery Guns.								
12	British	Mark VIII. W.	46	445.5	35.43	850	2,387	33,020
12	"	Mark IX. W.	50	496.5	40		2,580	39,280
12	"	Mark X. W.	58	558	45		2,900	47,697
12	"	Elswick	58	—	45		2,900	49,568
12	"	"	69	—	50		2,960	51,640
12	"	Vickers	65.8	617.7	50	850	3,010	53,400
12	"	Coventry Ord.	67	617	50		2,960	51,290
12	American	Mark I.	45.2	441.6	35		2,100	25,985
12	"	—	52	501.6	40		2,800	46,246
12	"	Bethlehem Steel Co.	53	—	45		2,800	46,195
12	"	"	66	—	50	867	3,000	54,247
12.01	Austrian	Skoda	51.9	540	45	992	2,625	47,402
12.01	French	Model 93-96	44.4	—	45	750	2,650	36,782
12.01	"	Model 1902	—	—	45		2,870	42,890
12.01	"	Schneider-Canet	52.9	—	45	826	2,952	50,007
12.01	"	"	57.3	—	50		3,116	55,717
12.01	"	Model 1906	—	—	50	970	3,030	—
12.01	German	Krupp	45.86	540	45	981	2,674	48,728
12.01	"	"	51.45	600.36	50		2,838	54,859
12	Italian	Armstrong	48.5	—	40	850	2,500	38,925
12	Russian	Obukoff	55.7	420	31.9	731	2,090	22,130
12	"	Admiralty	59	—	40	720	2,600	—
10 inch to 11.02 inch. Main Battery Guns.								
10	British	Elswick	34	—	45	500	2,800	27,181
10	"	"	41	—	50		3,000	33,318
10	"	Vickers	34.55	464.9	45		3,000	30,990
10	American	Mark III.	33.4	399.6	40		2,800	27,204
10	"	Bethlehem Steel Co.	35.4	—	45		2,800	27,174
10.8	French	Model 93-96	34.5	—	45	562	2,650	27,188
10.8	"	Schneider-Canet	41.7	—	50	606	3,116	40,859
10.33	German	Long, Krupp	21.7	225.24	18.8	412	1,688	7,211
11.02	"	Krupp	43.4	—	40	562.2	2,700	30,000
11.02	"	"	39.79	551.16	50	780.6	2,835	42,435
10	Italian	Armstrong	30	417.6	40	448	2,460	18,798
10	Russian	Admiralty	32	—	45	488	2,600	—
9 inch to 9.45 inch. Medium Guns.								
9.2	British	Mark VIII. W.	25	384	40.08	380	2,347	14,520
9.2	"	Mark X. W.	28	442.35	46.6		2,800	20,685
9.2	"	Elswick	28	—	50		3,030	24,190
9.2	"	Vickers	27.75	473	50		3,110	25,485
9.2	"	Coventry Ord.	28	475	50		2,950	22,930
9.45	Austrian	Krupp	21.5	379.2	40	474	2,595	22,121
9.45	French	Model 93-96	23.6	—	40	375	2,870	21,445
9.45	"	Schneider-Canet	25.8	—	45	407	2,952	24,667
9.45	"	"	27.9	—	50		3,116	27,487
9.45	German	Krupp	25.4	378	37.4	474	2,296	17,330
9.45	"	"	25.09	473.44	50	403	2,845	26,655
9	Russian	Admiralty	—	—	45		2,500	—

(1) Six types of both the 16-inch and 15-inch gun are listed by Krupps, composed of two models in 40, 45, and 50-calibre lengths. (2) A 14-inch gun of 50-calibres length is to be mounted in the latest U.S. battleships, but no details are available.

Types of Modern Naval Ordnance (Continued).

Calibre in Inches.	Nationality.	Description.	Weight in Tons.	Total Length in Inches.	Length in Calibres.	Weight of Projectile in lbs.	Muzzle Velocity F. Seconds.	Muzzle Energy in Foot Tons.
7½ inch to 8½ inch. Secondary Battery Guns.								
8-24	British	Elswick	18-1	—	44	308-6	2,300	11,320
8	"	"	18	—	45	250	2,600	11,781
8	"	"	21	—	50		3,000	16,600
8	"	Vickers	18-75	360	45		2,850	14,080
8	"	"	16-95	400	50	216-7	3,350	16,360
7-5	"	Woolwich	14	337-5	45	200	2,600	9,349
7-5	"	Elswick	15	—	50		3,000	12,481
7-5	"	Vickers	16	386-7	50		3,007	12,540
7-5	"	Coventry Ord.	15-5	387-5	50		2,950	12,068
8	American	Mark III.	15-2	344-4	40	250	2,150	8,011
8	"	Mark V.	18	343-2	45		2,800	13,602
7-5	Austrian	Skoda	11-6	315-6	42		198	2,700	10,025
7-64	French	Model 93-96	12-5	—	40	190	2,870	10,890
7-9	"	Schneider-Canet	16-2	—	50	231	3,116	15,601
8-2	"	"	18-6	—	50	275	3,116	18,572
8-27	German	Krupp	14-8	370-8	45	309	2,707	15,684
8-27	"	"	16-56	413-4	50		2,863	17,620
8	Italian	Armstrong	—	—	45	250	2,600	11,730
8	Russian	Obukoff	13-64	243-84	35	192	1,925	—
8	"	Admiralty	—	—	45	188	2,800	—
5-9 inch to 7 inch. Secondary Battery Guns.								
6	British	Woolwich	7-4	269-5	45	100	2,750	5,250
6	"	Elswick	8-75	—	50		3,050	6,492
6	"	Vickers	7-75	310-07	50		3,190	7,055
6	"	Coventry Ord.	8-75	310	50	100	2,850	6,034
6	American	Mark III.	6	255-6	40		2,150	3,204
6	"	Mark VI.	8-17	300	50		2,900	5,838
6	"	Bethlehem	7-2	—	45	105	2,600	4,967
6	"	Steel Co.	8-4	—	50		2,900	6,180
5-9	Austrian	Skoda	5-18	234	40	112-5	2,608	5,308
6-46	French	Model 93-96	8-1	—	45	115	2,870	6,568
6-46	"	Model 1902	8-5	322-8	47-5		3,000	7,185
6-9	"	Schneider-Canet	10-8	—	50	165	3,116	11,143
5-9	"	"	6-8	—	50	99	3,116	6,686
5-9	German	Krupp	5-34	264	45	90-39	3,008	5,680
5-9	"	"	6-03	293-28	50		3,196	6,389
6-69	"	"	7-67	323-4	45		3,080	9,271
6-69	"	"	8-4	357-48	50	141-1	3,238	10,252
6	Italian	Armstrong	5-7	250-8	40	100	2,149	3,169
6	"	"	6-5				2,297	3,622
6	Russian	Obukoff	6-26	210	35	89	2,080	2,682
6	"	Admiralty	—	—	45		2,900	—
3-94 inch to 5-44 inch. Anti-Torpedo Craft Guns.								
4-7	British	Elswick	3-3	—	50	45	3,000	2,808
4-7	"	Vickers	3-1	236-2	48-4	45-14	3,050	2,910
4-7	"	Coventry Ord.	3-7	242-5	50	45	3,000	2,810
4	"	Elswick	2-1	208	50	31	3,000	1,934
4	"	Vickers	2-05	208-4	50		3,030	1,975
4	"	Coventry Ord.	2-1	208	50		3,000	1,934
5	American	Bethlehem Steel Co.	5	261	51	50	3,150	3,439
5	"		4-6	256	50	60	2,700	3,032
4	"		2-9	205	50	33	2,800	1,794
4	"	2-6	2,500				1,430	
5-44	French	Model '93	4-1	—	45	66-14	2,625	3,160
4-7	"	Schneider	3-2	—	45	48	2,952	2,932
4-7	"	"	3-5	—	50		3,116	3,268
3-94	"	Model '92	2-2	—	55	30-87	2,500	1,340
3-94	"	Schneider	1-9	—	45	28-6	2,952	1,734
3-94	"	"	2	—	50		3,116	1,931
4-7	German	Krupp	2-9	212-6	45	53	2,913	3,212
4-7	"	"	3-1	236-2	50		3,061	3,442
4-1	"	"	2	185-6	45	34	2,920	2,086
4-1	"	"	2-05	206-6	50		3,071	2,305
4-7	Russian	Admiralty	—	—	45	46	2,700	—

TABLE W.—LIST OF DRY DOCKS, BUILT, BUILDING, OR PROJECTED.

Capable of holding the latest armoured ships, i.e. having a length of 500 ft. or over, a width at entrance of over 80 ft., and a depth over sill from 27 ft. upwards.

Name of Port.	Docks (Graving Docks, unless otherwise stated).	Length.		Width at Entrance.	Depth on Sill. H.W.O.S. Tides.	Notes.
		Over all.	Over blocks.			

DETAILS OF BRITISH AND COLONIAL DOCKS SUSPENDED

List of Dry Docks, Built, Building, or Projected (Continued).

Name of Port.	Docks (Dry Docks, unless otherwise stated).	Length.		Width at Entrance.	Depth on Sill. H.W.O.S. fms.	Notes.
		Over all.	Over blocks.			
<i>Austria:</i> Pola	Floating Dock	584	584	111½	37	22,000-ton lift
<i>France:</i> Havre	Dry Dock, No. 4	656	625	98	28½	
	New Dock	787	—	98½	29½	
Cherbourg	Government Dock, No. 5	656	608	93½	39½	
	New Dock	?	?	?	?	Projected
Brest	"Government Docks, Nos. 2 and 4	—	518	91½	35½	Double Dock
	New Dock	?	656	118	36	Proposed
	Town Dry Dock	737	—	82	34	
	New Dock	?	?	?	?	Projected
Lorient	Government Docks, No. 2	620	608½	86½	29½	
	"No. 3	620	608½	92	32	Proposed
St. Nazaire	Government Dock, No. 1	631	598	82½	28	Cie. Générale Transatlantique
	New Dock	738	—	93½	38	
Toulon	Government Docks, Missiessy 3	585	574½	93½	30½	
	"No. 4	?	?	?	?	Building
	Vauban Graving Dock, Double	1312	—	100	34½	Proposed
<i>Germany:</i> Kiel	Government Docks, No. 5	594	570	94	37	
	"No. 6	594	570	94	37	
	Floating Dock	570	—	154	35½	To lift 40,000 tons Pro.
Holtenau	Government Dock, No. 1	570	570	135	35	To lift 40,000 tons
Brunsbüttel	"No. 2	1083	1000	148	36	Building
Hamburg	Blohm and Voss Floating Dock, No. 3	1083	1000	148	36	Building
	Blohm and Voss Floating Dock, No. 4	560	560	88	28	To lift 17,000 tons
	Blohm and Voss Floating Dock, No. 5	595	595	88	28	To lift 17,500 tons
	Vulkan Co. Floating Dock	756	756	88½	36	To lift 22,500 tons
	Reiberstieg Cos. Floating Dock	722	722	108½	32½	To lift 36,000 tons
Bremerhafen	Kaiser Dry Dock	511½	511½	97	26	To lift 20,000 tons
Bremen	Floating Dock	754½	741½	98½	35½	
Wilhelmshafen	Government Docks, No. 4	?	?	?	?	Projected
	"No. 5	624	584	101	35	
	"No. 6	624	570	98½	35	
	Entrance Lock	594	570	94	32	
	Floating Dock	853	822	131½	34	Can be used as dock Bldg. To lift 35,000 tons
	"	?	?	?	?	Projected
<i>Italy:</i> Genoa	Bacino di Darsena, No. 1	571	561	81½	29½	
Spezia	Government Dry Docks, No. 5	702	687	105½	33	
	"No. 6	504½	491	90½	32½	
Naples	Municipal Dock, No. 1	659½	643	95	33½	
Palermo	Dry Dock	565	562½	85½	27½	
Taranto	Principe de Napoli Dock	708½	690½	108½	32½	
Venice	Government Dry Dock, No. 4	656	640	105	38½	Building
	"No. 3	780	—	—	32	Proposed
<i>Japan:</i> Hakodate	Dry Dock, No. 1	531½	480½	81½	30½	
	"No. 2	?	?	?	?	Building?
Kure	Government, No. 3	676	666	100	34	
Nagasaki	No. 1, Tategami	523	510	89	27½	
	No. 3	722	714	96½	34½	Mitsu Bishi Co.
Sasebo	Government, No. 3	—	538	—	33	
Kobe	Dry Dock, No. 3	—	714	96½	34½	
Yokosuka	Government, No. 4	541½	538½	98½	32	
	New Government	—	800	120	—	Finished 1915
Yokohama	No. 1	530½	483½	93½	27½	Yokohama Dock Co.
Port Arthur	Government, No. 2	540	500	93½	32	

List of Dry Docks, Built, Building, or Projected (Continued).

Name of Port.	Docks (Dry Docks, unless otherwise stated).	Length.		Width at Entrance.	Depth on Sill. H.W.O.S. Tides.	Notes.
		Over all.	Over blocks.			
<i>Mexico :</i> Salinaburg	Dry Dock	590	—	98	31	
<i>Portugal :</i> Lisbon	Government Dock, No. 1	607	549	82	32½	
<i>Russia :</i> Kronstadt	Peter Dock	984	?	?	?	
	Alexei-Nicolai Dock	780	750	123	34	Building
	Alexander Dock	600	584	85	30	
Libau	Government Docks, No. 1	600	—	85	30	
	" " No. 2	600	—	85	30	
Sevastopol	Alexandrovsky Dock	620	487	85	32	
Nicolaieff	Government Floating Dock	656	656	136½	35	Building, 40,000 ton lift
Vladivostock	Nicolas Dock	572	512	90	30	
	New Dock, No. 1	700	660	100	34	Building
	" " No. 2	700	660	100	34	Proposed
<i>South America :</i> Bahia Blanca	Dry Dock	1330	—	90	34	Building
Talcahuano	(Govt. of Chili) Dry Dock	614	599½	87	30½	
	Dry Dock	856	—	117	36	Proposed
	Floating Dock	?	?	?	?	Proposed, 18,000-ton lift
Rio-de-Janeiro	Alfonso-Penna Floating Dock	715½	—	102	36	30,000-tons lift
	No. 1 Graving Dock	—	—	—	36	Building
<i>Spain :</i> Ferrol	Government Dock, No. 1	—	600	100	37	
<i>U.S. America :</i> Portsmouth, N.H.	Navy Yard, (Kittery) Dry Dock	739½	714½	101½	30	
Boston, Mass.	" " Charlestown, No. 2	729½	718½	112	30	
Brooklyn, N.Y.	Timber, No. 3	726	710	110	31	
	Philadelphia Navy Yard	659	615½	105½	29	
League Island, Pa.	Philadelphia Navy Yard	739½	707½	104½	30	
Newport News, Va.	Simpson Dock, No. 2	785	775	84	30	N. News Shipbuilding Co. Proposed
	Government Floating Dock	650	—	110	?	
Norfolk	" Granite Dock	747	—	110	34	"
Key West	" Floating Dock	?	—	?	?	"
Pensacola	Navy Yard, Dry Dock	?	—	?	?	"
New Orleans, La.	Steel Floating Dock	525	—	100	28	To lift 18,000 tons
Algiers	" " " Govern-ment	525	—	100	28	" " " "
Hamilton	Floating Dock, Government	545	—	100	33	To lift 17,500 tons
Mare Island, Cal.	Navy Yard, Granite Dock	513	—	80½	27½	
	Concrete Dock	720	708½	102	30	
San Francisco	Hunter's Point, No. 2, Stone	750	—	86-	30	California Dry Dock Co.
	" " No. 3, Concrete	1050	—	92-	34½	
	" " Union Ironworks	1000	—	144	—	Private dock building with Government subsidy.
	Balboa, No. 1 *	—	1110	110	41½	
	Steel Floating Dock, Govern-ment	?	?	?	?	To be completed, April, 1918
Bremerton, Wash.	New Graving Dock	837	800	113	35	
Paget Sound	Government Timber Dock	640	608½	92½	30	At Port Orchard
Philippine Islands	Dewey Floating Dock	500	500	100	35	At Subic. 18,000-ton lift

* Pacific entrance to Panama Canal.

TABLE X.—MERCHANT SHIPS OF 10,000 REGISTER TONNAGE AND OVER

NOTES TO LISTS.—(1) indicates a single screw, (3) three screws, and (4) four screws; all others are twin-screw ships. In the Notes column, W.T. indicates a wireless-telegraphy installation, S.S., submarine signals, S.L.B., Stone-Lloyd bulkhead doors.

TEMPORARILY SUSPENDED.

TABLE Y.—SUMMARY OF PASSENGER MERCHANT
SHIPS OVER 10,000 TONS.

TEMPORARILY SUSPENDED.

TABLE Z.—SPEED.
THE FASTEST COMPLETED WARSHIPS IN THE WORLD.

Battle-ships.			Battle-Cruisers.			Armoured Cruisers.			Light Cruisers and Scouts.			Destroyers.		
Nation- ality.	Name.	Speed.	Nation- ality.	Name.	Speed.	Nation- ality.	Name.	Speed.	Nation- ality.	Name.	Speed.	Nation- ality.	Name.	Speed.
1 Italian	Dante Alighieri	24.5	British	Tiger	—	French	Ernest Renan	25.5	Italian	Quarto	29.5	British	Tartar	40.2
2 German	K.F. der Grosse	23.8	"	Queen Mary	30.92	British	Drake	25.3	British	Bellona	28.8	"	Swift	37.3
3 Italian	Napoli	23.6	"	Princess Royal	29.76*	"	King Alfred	25.1	German	Strasbourg	28.8	British	Amazon	36.8
4 Germany	Kaiser	23.6	"	Lion	29.73*	"	Essex	24.8	British	Stralsund	28.77	British	La Plata	36.8
5 British	Conqueror	23.13	German	Indefatigable	29	"	Lancaster	24.7	British	Boadicea	27.9	Argentine	Minarenet	36.3
6 French	Jean Bart	23.07	British	Seydlitz	28.7*	"	Suffolk	24.5	American	Salen	27.7	German	V104	36
7 Italian	Roma	22.8	German	Invincible	28.6	"	Cumberland	24.4	Brazilian	Bresku	27.553	"	Sax	35.01
8 British	V. Emanuele	22.74	"	Moltke	28.4	"	Berwick	24.3	British	Rio Grande	27.412	French	Casque	35.6
9 " "	Neptune	22.7	British	Goeben	28.4	"	Donegal	24.1	Austrian	Nottingham	27.67	British	Luncheon	35.34
10 " "	Colossus	22.6	German	Infexible	28.4	"	Leviathan	24.0	Austrian	Ad. Spain	27.67	French	Bouclier	35.34
11 American	Florida	22.54	Japanese	Von der Tann	28.2	Italian	S. Marco	24.04	British	Palnouth	27.016	British	Mohawk	35.294
12 Italian	Regina Elena	22.5	British	Kongo	27.8	French	Edward Quinet	23.92	German	Augsburg	27.01	Italian	Crusader	35.216
13 British	Ajax	22.47	British	Australia	26.8	French	G. Averoff	23.8	British	Albatross	26.84	French	Indomito	35.10
14 " "	Vanguard	22.4	"	New Zealand	26.36*	British	Devonshire	23.65	American	Cheslow	26.7	Argentine	Faulx	34.9
15 " "	Dreadnought	22.4	Japanese	Ikuoka	24.77	French	Black Prince	23.65	German	Cher	26.72	British	Cordoba	34.7
16 " "	Orion	22.31	"	Tenkuba	21.6	British	Waldeck	23.64	British	Koburg	26.32	American	Nubian	34.7
17 Brazilian	Minas Geraes	22.31	"			"	Roussau	23.64	British	Gloucester	26.32	British	Reld	34.548
18 American	North Dakota	22.29	"			"	Knox	23.63	British	Newcastle	26.266	British	Cossack	34.5
19 German	Oldenburg	22.2	"			"	Roxburgh	23.63	British	Attentive	26.25	German	G164	34.45
20 " "	King George V	22.17	"			"			"	Blanche	26.2	British	Zulu	34.3
21 British	Belcherophon	22.1	"			"			"			"	Ghurka	34.3
22 " "	Wyoming	22.04	"			"			"			German	V1	34.28
23 American	Collingwood	22	"			"			"			American	Paulding	34.1
24 British	Delaware	21.98	"			"			"			German	G137	33.9
25 " "			"			"			"			French	Fourche	33.8

* Tiger, Princess Royal, Lion, Indefatigable, Indomitable and New Zealand made or exceeded trial speeds in the Dogger Bank action.
† Kent made 24.8 knots in chase of German light cruiser Nürnberg in the Falkland Islands action.

TABLE AA.

AERO-NAUTICAL DISTANCE TABLE.

The following table shows the distance, in nautical miles, of the visible sea horizon from observers in aircraft at varying heights above the sea.

The necessary corrections due to Terrestrial Atmospheric Refraction have been made in computing the table.

(One sea mile = 6,080 ft.)

Height above the Sea in Feet.	Distance of Horizon in Nautical Miles.	Height above the Sea in Feet.	Distance of Horizon in Nautical Miles.
50	8.12	1,000	36.43
100	11.49	1,250	40
125	12.84	1,500	44.6
150	14.06	1,750	48
175	15.19	2,000	51.52
200	16.24	2,500	57.6
250	18.16	3,000	63.1
300	19.89	3,500	68.15
350	21.49	4,000	72.86
400	22.97	4,500	77.28
450	24.36	5,000	81.47
500	25.68	5,500	85.44
600	28.13	6,080	89.83
700	30.39	12,160	126.92
800	32.59	18,240	155.61
900	34.69	24,320	180.8

NOTES TO SHIP TABLES.

In the following tables, all nations after the British Empire are given in strictly alphabetical order.

The ships of the respective nations are grouped—1st, according to date, 2nd, according to class. Obsolescent or inferior vessels of the chief naval Powers have been drastically entitled “of questionable fighting value.” Ships coming under the *Dreadnought* category are printed in heavier type.

The Admiralty classification of cruisers, long accepted in Germany and elsewhere, has been adopted for this ANNUAL. “Cruisers” includes all large armoured and protected cruisers of over 7,000 tons, with a few exceptions below this tonnage where the armament or protection warrant inclusion in this category. All other vessels fall under the heading “Light Cruisers.” In both groups a distinction is still drawn between those carrying vertical side-armour and those otherwise protected.

All vessels larger than destroyers printed in italics are still incomplete. Displacements have been brought down to a common tonnage. Best-known sea-speeds is a column which is probably more interesting than technically valuable.

Where two figures are given in the armour column, the lesser denotes the least and the larger the greatest thickness of the plates referred to. Furthermore, the letter A refers to the belt armour, B to the protective deck, C to the thickness of armour protecting the side above the belt, D to the protection for the big guns, E to the protection for the secondary battery.

In the coal-capacity column double figures refer to the normal and maximum stowage room. British ships, as a rule, have their bunkers always full.

In the torpedo-tubes column, the figure above the line refers to above-water tubes, the figure below the line to submerged tubes.

Where two displacements and two speeds are given for submarine vessels the smaller tonnage and higher speed are for the boat in surface condition, the greater displacement and lower speed being when the boat is completely submerged. The higher speed is obtained with the larger of the engine-powers given.

In. = inch; pr. = pounder; Q. = quick-firer; light = guns for landing purposes; I.H.P. = indicated horse-power; B. = breech-loading; T. = turbines; W. = wire.

SPECIAL WAR NOTES

At the outbreak of war in August 1914 a large number of warships were under construction in the private shipbuilding yards of the Allied and Enemy Navies for foreign Governments. Italy had also many destroyers under construction at the time she commenced hostilities. In some cases, it has been officially announced that the belligerents have seized or purchased certain of these ships building for enemy or neutral Navies. But, in the majority of cases, their present nationality is uncertain. Some warships have been transferred from one nationality to another in the following Tables, though official announcements of their sale have not been published. For instance, Italy is credited with the six new Roumanian destroyers of the Vifor class, since it is impossible to deliver these ships to Roumania, via the Dardanelles. In other cases, no change in nationality has been made in the case of some ships building in the belligerent nations for neutral Governments when war broke out.

For obvious reasons, it is not expedient that full information should be given in the section devoted to the British Navy. Except for the striking out of War Losses officially announced, the addition of ships whose purchase has been stated by the Admiralty, and a few other details, the figures given for the British Navy are similar to those in the 1913-14 Edition of THE NAVY LEAGUE ANNUAL. Other alterations or additions to the British Navy are based on:—

- (a) Information available up to July 31st, 1914 ;*
- (b) Official announcements and despatches subsequently published ;*
- (c) Non-official information which has been permitted to be published by the Censorship.*

THE BRITISH EMPIRE.

BATTLESHIPS

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.			
								A	B	C	D	E		Guns.	Tubes.		
1894	1895		Magnificent	14,900	12,000	17.5	18.4	9	4	9	10	8	1200	4-12 in.	1		
1895	1897		Victorious				18.7							12-6 in. Q.			
1895	1896		P. George				18.3							16-3 in. Q.			
1895	1897		Jupiter				18.4							4-3 pr. Q.			
1896	1897		Cæsar				18.7				14			2000		2 Light Q.	
1896	1897		Mars				17.7									2 Machine	
1896	1897		Hannibal	12,950	13,500	18.25	18	6	2½	6	8	5	1000	4-12 in.	0		
1896	1898		Illustrious				17.5							12-6 in. Q.			
1897	1900		Canopus				18.6							10-3 in. Q.			
1899	1901		Glory				18.6							2 Light Q.			
1899	1901		Vengeance				19.3				12		2300	2 Machine			
1898	1902		Albion				18.7										
1899	1902		London	15,000	15,000	18	18.5	6-9	3	9	8	6	900	4-12 in.	0		
1899	1902		Venerable				18.4							12-6 in. Q.			
1899	1902		Implacable				18.7							16-3 in. Q.			
1902	1904		Queen				18.39				12		2100	2 Light Q.			
1902	1904		Prince of Wales				19							2 Machine			
1901	1903		Albemarle				20.1							2000	4-12 in.	4	
1901	1903		Duncan	20.2	5-7	2½	7	6	6	12-6 in. Q.							
1901	1903		Exmouth	20						10-3 in. Q.							
1901	1903		Russell	19.8				11			2 Machine						
1901	1904		Cornwallis	20													
1903	1904		Swiftsure	11,800				12,500		19	20	3-7	3	6	6	7	800	4-10 in.	0
											10		2000	14-7.5 in. Q.			
														14-14 pr. Q.			
														4-6 pr. Q.	2		
														4 Machine			
														2 Light Q.			
														4-12 in.			
														4-9.2 in.			
														10-6 in. Q.	0		
														14-3 in. Q.			
														14-3 pr. Q.	4		
														2 Machine			
														4-12 in.			
														14-7.5 in. Q.			
														10-9.2 in.	0		
														24-3 in. Q.			
														5 Machine	5		
1906	1907		Dreadnought (1)	17,900	23,000 (T)	21	22.4	4	2	8	8	7	900	10-12 in.	0		
1907	1909		Bellerophon	12			16-4 in. Q.										
1907	1909		Temeraire	12			5 Machine										
1907	1909		Superb	12													
1908	1910		St. Vincent	22.1			11				2½		11	8	2700	10-12 in.	0
1908	1910		Collingwood	22.74												16-4 in. Q.	
1909	1910		Vanguard	21.62	9½	2½	9½	8	11	2700	6 Machine	3					
				21.9													
				22													

(1) *Dreadnought* has five torpedo tubes and, in place of the 4 in. guns, carries 24-3 in. Q.

THE BRITISH EMPIRE (Continued).

BATTLESHIPS (Continued).

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Fuel Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes.
A. Battleships (Continued).															
—	1909	1911	Neptune	19,900	25,000 (T)	21	22.7	11	22	9½	8-12	—	900	10-12 in.	0
—	1910	1911	Colossus	20,000			22.6						2700	16-4 in. Q.	3
—	1910	1911	Heracles	22,500			21.91						1000	6 Machine	0
—	1910	1911	Orion				22.31						3700	10-13.5 in.	3
—	1911	1912	Conqueror	27,000 (T)	21	23.133	12	22	9½	8-12	3-4	1000	16-4 in. Q.	0	
—	1911	1912	Thunderer			21.45						3700	6 Machine	3	
—	1911	1912	Monarch			21.88						1000	10-13.5 in.	0	
—	1911	1912	King George V.			22.127						3700	16-4 in.	3	
—	1912	1913	Ajax	23,000 (T)	21	21.886	12	22	9½	8-12	3-4	1000	10-13.5 in.	0	
—	1912	1913	Audacious			22.47						3700	6 Machine	3	
—	1912	1914	Iron Duke			—						1500	12-6 in. Q.	0	
—	1912	1914	Marlborough			—						4000	6 Smaller	5	
—	1913	1914	Emperor of India	25,000 (T)	21	—	12	22	10	8-12	6	1500	10-13.5 in.	0	
—	1913	1914	Benbow									4000	6 Smaller	5	
—	1913	1914	Agincourt	27,500	45,000 (T)	22	—	9	21	9	9	6	1500	14-12 in.	0
—	1913	1914	Erin	23,000	26,500 (T)	21	—	11	3	8	12	5	3000	20-6 in. Q.	0
—	1913	1914	Canada	28,000	37,000 (T)	21	—	11	3	8-11	11	7	900	20-3 in. Q.	3
—	1913	1914	Q. Elizabeth	27,500	58,000 (T)	25	—	13½	22	10	8-13½	6	4000	10-13.5 in.	0
—	1913	1914	Warspite										2740	4-3 in. Q.	5
—	1914	1915	Vallant										1000	10-14 in.	0
—	1914	1916	Malaya										3500	6-3 pr. Q.	5
—	1915	1915	Royal Sovereign	25,250	31,000 (T)	21	—	13½	22	10	8-13½	6	4000	8-15 in.	0
—	1914	1915	Royal Oak										—	16-6 in. Q.	5
—	1914	1915	Resolution										—	4-3 in. Q.	5
—	1914	1915	Ramillies										—	—	—
—	1914	1915	Revenge										—	—	—
—	—	—	Renown	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	Repulse												
—	—	—	Resistance	—	—	—	—	—	—	—	—	—	—	—	—

BATTLE CRUISERS.

—	1907	1909	Invincible	17,250	41,000 (T)	25	28.6	7	3	7	10	—	1000	8-12 in.	0		
—	1907	1908	Inflexible				28.4							16-4 in. Q.	5		
—	1907	1908	Indomitable				28.7							4-3 in. Q.	5		
—	1909	1911	Indefatigable	18,750	43,000 (T)	25	28.13	8	3	7	10	—	2500	4-3 in. Q.	5		
—	1911	1913	Australia	19,200	44,000 (T)		28.3							—	—		
—	1911	1912	New Zealand	18,800	44,000 (T)		27.6							—	—		
—	1910	1912	Lion	26,350	70,000 (T)		29.78							1000	8-13.5 in.	0	
—	1911	1912	Princess				30.7							3500	16-4 in. Q.	2	
—	1912	1913	Queen Mary		27,000	75,000 (T)	28							30.92	1500	4-3 in. Q.	0
—	1913	1914	Tiger	28,000	87,500 (T)	28							—	4000	8-13.5 in.	0	
—	1913	1914	Tiger	28,000	87,500 (T)	28	—	9½	3	8	10	3-4	1500	12-6 in. Q.	0		
—	1913	1914	Tiger	28,000	87,500 (T)	28	—	9½	3	8	10	3-4	4000	4-3 in. Q.	2		

NOTE.—An old battleship, *Revenge* (1892), appeared in the "Navy List," October 1914. Her details are: 14,100 tons displacement, H. P. 13,000 = 17 knots (much less now). Original armament consisted of four old 13.5 in., 10-6 in., and smaller Q.F. guns. She is probably used now for subsidiary service.

THE BRITISH EMPIRE, (Continued).

CRUISERS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes.
ARMoured COMPLETE.															
—	1899	1902	Sutlej	12,000	21,000	21	{ 22.3 22.4 22 }	6	3	6	6	5	800	2-9.2 in. 12-6 in. Q.	0
—	1901	1902	Bacchante										1600	12-3 in. Q.	2
—	1901	1904	Euryalus											5 Smaller Q. 2 Machine	
—	1901	1902	Drake	14,100	30,000	23	{ 25.3 24.1 25.1 }	6	3	6	5-6	6	1250	16-6 in. Q.	0
—	1901	1903	Leviathan										2500	14-3 in. Q.	2
—	1901	1903	King Alfred											3 Smaller Q. 2 Machine	
—	1901	1903	Kent	9,800	22,000	23	{ 24.1 24.8 24.4 24.3 24.8 24 24.5 24.7 }	4	2	4	5	4	800	14-6 in. Q.	0
—	1901	1903	Essex										1600	8-3 in. Q.	2
—	1902	1903	Berwick											5 Smaller Q.	
—	1902	1903	Donegal											8 Machine	
—	1902	1904	Lancaster												
—	1902	1904	Cornwall												
—	1902	1904	Cumberl'nd												
—	1903	1904	Suffolk												
—	1903	1905	Antrim	10,850	21,000	22.3	{ 23.63 23.3 23.47 23.8 23.63 }	6	2	6	5-6	6	800	4-7.5 in. 6-6 in. Q.	0
—	1903	1905	Carnarvon										1800	22 Small Q.	2
—	1903	1905	Hampshire											2 Machine	
—	1904	1905	Devonshire												
—	1904	1906	Roxburgh												
—	1904	1906	Bl'k Prince	13,550	23,500	22.3	{ 23.65 23.4 23.292 23.272 23.1 }	6	3	6	6	6	1000	6-9.2 in. 10-6 in. Q.	0
—	1904	1906	Duke of Edinburgh										2000	22 Small Q.	3
—	1905	1906	Cochrane											8 Machine	
—	1905	1907	Achilles											6-9.2 in.	
—	1905	1907	Warrior											22 Small Q. 8 Machine	
—	1906	1908	Shannon	14,600	27,000	23	{ 22.741 23.01 23.4 }	6	1	6	8	6	950	4-9.2 in. 10-7.5 in.	0
—	1906	1908	Minotaur										2250	16-3 in. Q.	5
—	1907	1908	Defence											5 Machine	
PROTECTED COMPLETE.															
—	1890	1893	Edgar *	7,350	12,000	19.5	{ 20.97 20.9 20 20.5 20.4 19.5 }	—	5	—	6	6	850	2-9.2 in. 10-6 in. Q.	0
—	1891	1893	Endymion *										1250	17 Smaller Q.	2
—	1892	1894	Grafton *											2 Machine	
—	1892	1894	Theseus *	7,700	12,000	19.5	{ 20.5 20.4 19.5 }	—	5	—	6	6	1250	1-9.2 in. 12-6 in. Q.	0
—	1892	1894	Gibraltar *										1500	19 Smaller Q.	2
—	1892	1894	Crescent											2 Machine	
—	1891	1893	Roy.Arthur	14,460	25,000	22	{ 20.65 20.7 20.5 21.6 21.32 21.17 21.6 21.1 }	—	6	—	6	6	1500	2-9.2 in. 16-6 in. Q.	0
—	1895	1898	Terrible										3000	4-3 in. Q.	4
—	1895	1898	Terrible											12 Small Q. 2 Machine	
—	1896	1899	Diadem	11,000	16,500	20.25	{ 20.65 20.7 20.5 21.6 21.32 21.17 21.6 21.1 }	—	4	—	6	6	1000	16-6 in. Q.	0
—	1897	1899	Europa										2000	12-3 in. Q.	2
—	1897	1899	Niobe †											14 Smaller Q.	
—	1897	1900	Andromeda	18,000	20.5	{ 20.65 20.7 20.5 21.6 21.32 21.17 21.6 21.1 }	{ 20.65 20.7 20.5 21.6 21.32 21.17 21.6 21.1 }	—	4	—	6	6	2000	2 Machine	2
—	1898	1900	Amphitrite												
—	1898	1900	Argonaut												
—	1898	1900	Ariadne												
—	1898	1902	Spartiate												

* Some have been reconstructed. Details are given to original design and to first trial speeds. Before the war, their engines had been reduced to 10,000 H.P. for a maximum speed of 17 knots.
† Dominion of Canada.

THE BRITISH EMPIRE (Continued).

LIGHT CRUISERS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Fuel Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes.
ARMoured.															
1913	1914	1914	Arethusa	3,560	31,000 (T)	29		3	1	3 1/2	4	750 (Oil)	2-6 in. Q. 6-4 in. Q. 4 Machine	4	0
1913	1914	1914	Aurora												
1913	1914	1914	Galatea												
1913	1914	1914	Inconstant												
1913	1914	1914	Penelope												
1913	1914	1914	Phaeton	3,750	35,000 (T)	29		3	1	3 1/2	4	750 (Oil)	2-6 in. Q. 8-4 in. Q. 4 Machine	4	0
1913	1914	1914	Royalist												
1913	1914	1914	Undaunted												
1914	1915	1915	Calliope												
1914	1915	1915	Conquest												
1914	1915	1915	Cordelia												
1914	1915	1915	Carysfort												
1914	1915	1915	Cleopatra												
1914	1915	1915	Comus												
1914	1915	1915	Caroline												
1914	1915	1915	Champion												
—	—	—	No. 1.	—	—	—		—	—	—	—	(Oil)	—	—	—
—	—	—	No. 2.												
—	—	—	No. 3.												
—	—	—	No. 4.												
PROTECTED.															
1890	1892	1892	Philomel *	2,575	7,500	19	—	—	2 1/2	—	2	300	8-4.7 in. Q. 13 Small Q.	2	0
—	—	—	—												
1891	1893	1893	Æolus	3,600	9,000	20	20.2	—	2	4 1/2	—	440	2-6 in. Q. 6-4.7 in. Q. 7 Small Q. 4 Machine	4	0
1891	1893	1893	Rainbow †												
1890	1892	1892	Sirius												
1891	1892	1892	Melpomene												
1891	1893	1893	Brilliant	3,400	9,000	19.5	19.7	—	2	4 1/2	—	535	2-6 in. Q. 8-4.7 in. Q. 9 Small Q. 4 Machine	4	0
1891	1893	1893	Sappho												
1893	1894	1894	Astræa												
1893	1894	1894	Cambrian												
1893	1895	1895	Charybdis	4,360	9,000	19.5	20.5	—	2	4 1/2	—	400	2-6 in. Q. 8-4.7 in. Q. 9 Small Q. 4 Machine	4	0
1893	1895	1895	Flora												
1893	1895	1895	Fox												
1893	1895	1895	Hermione												
1894	1897	1897	Eclipse	5,600	9,600	19.5	20.1	—	2 1/2	3	—	1000	11-6 in. Q. 8-3 in. Q. 1 Smaller Q. 4 Machine	1	2
1895	1897	1897	Minerva												
1895	1897	1897	Talbot												
1895	1898	1898	Diana												
1895	1898	1898	Juno												
1895	1898	1898	Venus												
1896	1898	1898	Isis												
1896	1898	1898	Dido												
1896	1898	1898	Doris												
1896	1898	1898	Doris												
1896	1899	1899	Furious	5,750	10,000	19	20.1	—	3	—	3	500	10-6 in. Q. 8-3 in. Q. 1 Small Q. 2 Machine	0	2
1896	1898	1898	Vindictive												
1896	1899	1899	Proserpine	2,135	7,000	20	21	—	2	—	4	250	8-4 in. Q. 8-3 pr. Q. 2 Machine	2	0
1896	1897	1897	Pelorus												
1897	1900	1900	Pegasus												
1897	1901	1901	Pyramus												
1898	1901	1901	Prometheus	2,200	7,000	20	20.7	—	2	—	4	520	8-4 in. Q. 8-3 pr. Q. 2 Machine	2	0
1898	1900	1900	Psyche												
1899	1900	1900	Pioneer *												
1900	1901	1901	Pandora												

* Australian Navy.

† Dominion of Canada.

THE BRITISH EMPIRE (Continued).

LIGHT CRUISERS (Continued).

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Fuel Capacity.	Armament.										
								A	B	C	D	E		Guns.	Tubes.									
—	1898	1900	Highflyer	5,600	10,000	20	{ 21·1 21 }	—	3	—	3	—	500	{ 11·6 in. Q. 8·3 in. Q. 1 Small Q. 2 Machine }	0									
—	1898	1901	Hyacinth										1100											
—	1902	1904	Challenger	5,880	12,500	21	{ 21 21·1 }	—	3	—	3	—	600	{ 12·4 in. Q. 8·3 pr. Q. 2 Machine }	2									
—	1903	1906	Encounter										1225											
—	1903	1905	Amethyst (1)	3,000	9,800	21·75	{ 23·62 22·1 22·17 22·45 25·42 }	—	2	—	—	—	300	{ 9·4 in. Q. 6 Smaller Q. }	2									
—	1903	1905	Topaze										500											
—	1904	1905	Diamond																					
—	1904	1905	Sapphire																					
—	1904	1905	Adventure																					
—	1904	1906	Attentive	2,940	16,000	{ 25 25·12 25·15 }	{ 25·25 25·12 25·15 }	2	1½	—	—	—	150	{ 9·4 in. Q. 6 Smaller Q. }	2									
—	1904	1905	Foresight	2,945	16,500																			
—	1904	1905	Forward	3,000	16,500																			
—	1904	1905	Patrol	3,000	16,500	{ 25 25·07 25·19 27·9 28·8 26·2 25·8 }	{ 25·06 25·07 25·19 27·9 28·8 26·2 25·8 }	—	½	—	½	—	400	{ 10·4 in. Q. 1 Machine }	2									
—	1904	1905	Sentinel	2,940	17,000																			
—	1905	1905	Skirmisher (2)	3,300	18,000 (T)								25			{ 26·7 26·29 26·17 26·4 26·84 27·01 25·9 25·6 26 }	—	1½	—	1½	—	350	{ 2·6 in. Q. 10·4 in. Q. 4 Machine }	0
—	1908	1909	Boadicea	3,360																				
—	1909	1910	Bellona																					
—	1909	1910	Blanche																					
—	1910	1911	Blonde																					
—	1909	1910	Glasgow (3)	4,820	22,000 (T)	25	{ 26·7 26·29 26·17 26·4 26·84 27·01 25·9 25·6 26 }	—	2	—	4	—	600	{ 8·6 in. Q. 4·3 pr. Q. 4 Machine 1 Light }	0									
—	1909	1910	Gloucester										850											
—	1909	1910	Liverpool																					
—	1909	1910	Newcastle																					
—	1910	1910	Bristol																					
—	1910	1911	Falmouth	5,250	22,000 (T)	24·75	{ 26·84 27·01 25·9 25·6 26 }	—	2	—	4	—	650	{ 10·4 in. Q. 1 Machine }	2									
—	1911	1911	Dartmouth										1000											
—	1910	1911	Weymouth																					
—	1911	1912	Yarmouth																					
—	1911	1912	Chatham																					
—	1912	1913	Dublin (3)	5,400	25,000	24·75	{ 27·4 }	—	1½	2	—	4	650	{ 9·6 in. Q. 4·3 pr. Q. 4 Machine 1 Light }	2									
—	1912	1913	Southampton	(T)																				
—	1911	1911	Active	3,440	18,000 (T)	25	{ 25·9 27·15 }	—	½	—	1½	—	350	{ 10·4 in. Q. 1 Machine }	2									
—	1912	1913	Fearless										600											
—	1913	1914	Birmingham	5,440	25,000 (T)	24·75	{ 27·4 }	—	1½	2	—	4	650	{ 9·6 in. Q. 4·3 pr. Q. 4 Machine 1 Light }	0									
—	1913	1914	Lowestoft										1000											
—	1913	1914	Nottingham																					
Commonwealth of Australia				5,600	25,000 (T)	25	{ }	—	2	—	4	—	650	{ 9·6 in. Q. 4·3 pr. Q. 4 Machine 1 Light }	0									
—	1912	1913	Melbourne										1000											
—	1912	1913	Sydney																					
—	1913	1914	Brisbane																					
—	Pro.	—	Adelaide	5,600	(T)	{ }	{ }	—	2	—	4	—	1000	{ 4 Machine 1 Light }	2									
—	Pro.	—	Adelaide																					

(1) Turbines.

(2) *Boadicea* and *Bellona* mount 6·4 in. Q.

(3) *Glasgow* and *Dublin* have 1·3 in. Q. additional to armament given.

THE BRITISH EMPIRE (Continued).

DESTROYERS.

NOTE.—Trial speeds or best service speeds given directly after the vessel's name.

"A" CLASS.

- *Boxer* 29'17, *Bruizer* 27'97, *Opossum* 28'24, *Sunfish* 27'62. Launched, 1894-95. Displacement, 260-295 tons. Designed I.H.P. 4,000-4,500. Designed speed, 27 knots. Armament, 12 pr. Q., 5-6 pr. Q., and one 18 in. torpedo tube. Coal capacity, 60-70 tons.
- *Conflict* 27'21, *Fervent* 26'73, *Lightning* 27'94, *Porcupine* 27'91, *Ranger* 27'13, *Surly* 28'05, *Wizard* 27'164, *Zephyr* 27'171. Launched, 1894-95. Displacement, 275-320 tons. Designed I.H.P. 4,000-4,500. Designed speed, 27 knots. Armament, 1-12 pr. Q., 5-6 pr. Q., and two 18 in. torpedo tubes. Coal capacity, 60-70 tons.

"B" CLASS.

- *Earnest* 30'13, *Griffon* 30'11, *Kangaroo* 30'184, *Lively* 30'278, *Locust* 30'159, *Myrmidon* 30'229, *Orwell* 30'282, *Panther* 30'14, *Peterel* 30'097, *Quail* 30'385, *Seal* 30'15, *Spiteful* 30'1, *Sprightly* 30'102, *Success* 30'22, *Syren* 30, *Thrasher* 30'13, *Virago* 30'365, *Wolf* 30'265. Launched 1896-1901. Displacement, 355-400 tons. Designed H.P. 6,000-6,300. Designed speed, 30 knots. Coal capacity, 80-85 tons.

Also

- *Arab* 31. Launched, 1901. Displacement, 470 tons. Designed H.P. 8,600 = 32 knots (never made). Coal capacity, 90 tons.
- *Express* 31'021. Launched, 1897. Displacement, 499 tons. Designed H.P. 9,250 = 33 knots (never made). Coal capacity, 80 tons. Armament of all above boats, 1-12 pr. Q., 5-6 pr. Q., two 18 in. tubes.

Also

Albacore 26'8, *Bonetta* 26'75. Launched, 1908. Displacement, 440 tons. Designed H.P. (T.), 7,000 = 27 knots. Armament, 3-12 pr. Q., two 18-inch torpedo-tubes. Coal capacity, 44 tons. Purchased, 1908.

"C" CLASS.

- *Avon* 30'254, *Bat* 30'299, *Bittern* 30'354, *Brazen* 29'565, *Bullfinch* 29'46, *Cheerful* 30'152, *Crane* 30'347, *Dove* 29'36, *Electra* 29'583, *Fairy* 30'201, *Falcon* 30'135, *Fawn* 30'462, *Flirt* 30'14, *Flying Fish* 30'371, *Gipsy* 30'207, *Grayhound* 30'424, *Kestrel* 30'044, *Leopard* 30'139, *Leven* 30'383, *Mermaid* 30'833, *Osprey* 30'6, *Ostrich* 30'161, *Otter* 30'274, *Racehorse* 30'354, *Rogbuck* 30'438, *Star* 31'05, *Sylvia* 29'07, *Thorn* 30'174, *Vigilant* 30'147, *Violet* 30'16, *Vixen* 30, *Vulture* 30'277, *Whiting* 30'21. Launched, 1896-1901. Displacement, 350-400 tons. Designed H.P. 5,800-6,400. Designed speed, 30 knots. Coal capacity, 80-90 tons.

Also

- *Albatross* 31'522. Launched, 1898. Displacement, 430 tons. Designed H.P. 7,500 = 32 knots (never made). Coal capacity, 95 tons.
 - *Veloxy* 27'124. Launched, 1902. Displacement, 420 tons. Designed H.P. 7,000 = 27 knots (Turbines). Coal capacity, 90 tons.
- All above boats armed with, 1-12 pr. Q., 5-6 pr. Q., two 18 in. tubes.

"D" CLASS.

- *Angler* 30'409, *Coquette* 30'371, *Cygnets* 30'375, *Cynthia* 30'205, *Desperate* 30'428, *Fame* 30'168, *Foam* 30'18, *Mallard* 30'11, *Stag* 30'345. Launched 1896-1899. Displacement, 340-355 tons. Designed H.P. 5,400-5,800 = 30 knots. Coal capacity, 80 tons. All above boats armed with 1-12 pr. Q., 5-6 pr. Q., two 18 in. tubes.

"E" (OR "RIVER") CLASS.

- *Arun* 25'722, *Boyne* 25'72, *Chelmer* 25'7, *Cherwell* 25'6, *Colne* 25'57, *Des* 25'5, *Derwent* 25'68, *Doon* 25'8, *Eden*, 26'22, *Ettrick* 25'568, *Exe* 25'64, *Foyle* 25'65, *Garry* 26'51, *Itchen* 25'642, *Jed* 25'98, *Kale* 25'74, *Kennet* 25'99, *Liffey* 25'51, *Moy* 25'6, *Ness* 25'62, *Nith* 25'69, *Ouse* 25'56, *Ribble* 25'81, *Rother* 25'51, *Stour* 25'589, *Swale* 25'59, *Test* 25'625, *Teviot* 25'9, *Ure* 25'65, *Usk* 26'1, *Waveney* 25'62, *Wear* 25'62, *Welland* 26'24. Launched, 1903-08. Displacement, 545-590 tons. Designed I.H.P. 7,000-7,500. Designed speed, 25-25½ knots. Armament, 4-12 pr. Q. and two 18 in. torpedo tubes. Coal capacity, 132 tons (but *Stour* and *Test* only, 87 tons).

The *Eden* is fitted with turbine engines; the *Garry* has a specially designed stern which resulted in increased speed with the same engine power. These ships originally carried the armament of the 30 knot types, but three 8 cwt. 12 pr. Q. have been substituted for the five 6 pr. Q.

THE BRITISH EMPIRE (Continued).

DESTROYERS (Continued).

"F" CLASS.

- *Afridi* 33'6, *Cossack* 34'5, *Ghurka* 34'3, *Mohawk* 35'294, *Tartar* 40'2. Launched, 1907. Displacement, 865-885 tons. Designed I.H.P. (T), 14,000-14,500. Designed speed, 33 knots. Armament, 5-12 pr. Q. and two 18 in. torpedo tubes. Oil capacity, 75 to 100 tons. 1905 Programme.
- *Amazon* 36'8, *Crusader* 35'216, *Nubian* 34'7, *Saracen* 33'8, *Viking* 33'7, *Zulu* 34'3. Launched, 1908-09. Displacement, 888-1,045 tons. Designed I.H.P. (T), 15,500. Designed speed, 33 knots. Armament, 2-4 in. Q. and smaller. Two 18 in. torpedo tubes. Oil capacity, 85 to 103 tons. 1906 and 1907 Programmes.

"G" CLASS.

- *Basilisk* 27'98, *Beagle* 27'12, *Bulldog* 27'4, *Foxhound* 27'7, *Grasshopper* 27'04, *Harpy* 27'75, *Mosquito* 27'12, *Grampus* 28'1, *Pincher* 27'17, *Racon* 27'07, *Rattlesnake* 27'03, *Renard* 27'14, *Savage* 27'16, *Scorpion* 27'1, *Scourge* 27'06, *Wolverine* 27'1. Launched, 1909. Displacement, 900-975 tons. Designed I.H.P. (T), 12,000-12,750 = 27 knots. Armament, 1-4 in. Q., 3-12 pr. Q. Two 21 in. torpedo tubes. Coal capacity, 165-215 tons. 1908 Programme.

"H" CLASS.

- *Acorn* 27'22, *Alarm* 27'2, *Brisk* 27'6, *Cameleon* 28'03, *Comet* 27'9, *Fury* 27'3, *Goldfinch* 28, *Hope* 27'1, *Larne* 27'99, *Lyra* 28'71, *Martin* 28'9, *Minstrel* 28'9, *Nemesis* 27, *Nereide* 27'8, *Nymph* 27'5, *Redpole* 29'8, *Rifleman* 29'3, *Ruby* 30'23, *Shelarak* 28'3, *Staunch* 28'6. Launched, 1910. Displacement, 720-780 tons. Designed I.H.P. (T), 13,000 = 27 knots. Armament 2-4 in. Q., 2-12 pr. Q. Two 21 in. torpedo tubes. Oil capacity, 130 tons. 1909 Programme.
- *Paflagia* 28'48, *Yarra*, *Warrego*, Launched 1909-12, and *Derwent*, *Swan*, and *Torrens* building at Sydney, Australian Commonwealth flotilla. Displacement, 700 tons. Designed I.H.P. (T), 10,000 = 26 knots. Armament, 1-4 in. Q., 3-12 pr. Q. Three torpedo tubes. Oil capacity, 130 tons.

"I" CLASS.

- *Defender* 28'3, *Druid* 28'2, *Ferret* 30'2, *Forester* 29'8, *Goshawk*, *Hind* 28'1, *Hornet* 28, *Hydra* 28'1, *Jackal* 26'9, *Lapwing* 27'2, *Lizard* 27'5, *Phoenix* 27'8, *Sandfly* 27'7, *Tigress* 28'6. Launched, 1911. Displacement, 745-770 tons. Designed I.H.P. (T), 13,500 = 27 knots. Armament, 2-4 in. Q., 2-12 pr. Q. Two 21 in. torpedo tubes. Oil capacity, 89 tons. 1910 Programme.
- *Archer* 30'9, *Attack* 30'6. Launched, 1911. Displacement, 786 tons. Designed I.H.P. (T), 16,000 = 28 knots. Armament, as *Defender*. Oil capacity, 87 tons. Special Yarrow design. 1910 Programme.
- *Acheron* 29'4, *Ariel* 29'4. Launched, 1911. Displacement, 773 tons. Designed I.H.P. (T), 15,500 = 29 knots. Armament, as *Defender*. Oil capacity, 89 tons. Special Thornycroft design. 1910 Programme.
- *Badger* 30'7, *Beaver*. Launched, 1911. Displacement, 800-810 tons. Designed I.H.P. (T), 16,500 = 30 knots. Armament, as *Defender*. Oil capacity, 86 tons. Special Denny design. 1910 Programme.
- *Firedrake* 33'17, *Lurcher* 35'34, *Oak* 32'4. Launched, 1912. Displacement, 765 tons. Designed I.H.P. (T), 20,000 = 32 knots. Armament, as *Defender*. Oil capacity, 86 tons. Special Yarrow design. 1910 Programme.

"K" CLASS.

- *Acacia* 29, *Achates* 32'3, *Ambuscade* 30'4, *Christopher* 30'9, *Cockatrice* 29'7, *Contest* 30'7, *Midge* (32'9), *Owl* 32'7, *Shark* 31'4, *Sparrowhawk* 30'7, *Spitfire* 30'3. Launched, 1912-13. To standard Admiralty design. Displacement, 935 tons. Designed H.P. (T), 24,500 = 30 knots. Oil capacity, 130 tons.
- *Paragon*, *Porpoise*, *Unity*, *Victor*. Displacement, 928 tons. Designed H.P. (T), 22,500 = 30 knots. (All made about 30'8 knots on trial.) Oil capacity, 130 tons (special Thornycroft design).
- *Ardent* 29'5. Displacement, 935 tons. Designed H.P. (T), 24,000 = 30 knots. Oil capacity, 142 tons. (Special boat framed on Isherwood system to special Denny design.)
- *Fortune* 30'7. Displacement, 952 tons. Designed H.P. (T), 25,000 = 30 knots. Oil capacity, 130 tons. (Special Fairfield design.)
- *Hardy*. Displacement, 908 tons. H.P. (T), 21,000 = 29-30 knots. Oil capacity, 130 tons. (This boat was originally designed for a displacement of 935 tons, and for engines of 24,500 H.P. inclusive of two Diesel motors for cruising speed. The Diesel motors were abandoned and consequently her tonnage and H.P. are less than other boats of the "K" Class.)

THE BRITISH EMPIRE (*Continued*).

DESTROYERS (*Continued*).

- *Garland* 31. Displacement, 952 tons. Designed H.P. (T), 24,500 = 30 knots. Oil capacity, 130 tons. (Special Cammell-Laird and Parsons design.)
All above boats armed with 3-4 in. Q., 2-21 in. tubes.

"L" CLASS.

- *Laertes, Laforey, Lance, Landrail, Lark, Laurel, Laverock, Lawford, Legion, Lennox, Leonidas, Liberty, Linnet, Llewellyn, Lookout, Loyal, Lucifer, Lydiard, Lysander.* Launched 1912-13. Displacement, 965 tons. Designed I.H.P. (T), 24,500 = 29 knots. Armament, 3-4 in. Q. and four 21 in. torpedo tubes. Oil capacity, 135 tons. Complement 100. 1912 Programme.

"M" CLASS.

- *Manly, Mansfield, Mastiff, Matchless, Mentor, Meteor, Milne, Minos, Miranda, Moorsom, Morris, Murray, Myngs.* Launched, 1913-14. Displacement, tons. Designed H.P. (T) = knots. Armament, 4-4 in. Q. and four 21 in. torpedo tubes. Oil capacity, tons. Complement, . 1913 Programme.

Ten destroyers of the "N" Class were provided for in the 1914 Programme.

(NOTE.—It was announced in May 1914 that Messrs. Armstrong-Whitworth, Vickers, Ltd., and Hawthorn-Leslie had contracted for the construction of six large destroyers for the Turkish Navy. No report was received of their commencement, and nothing further has been heard of these boats.)

FLOTILLA LEADERS.

- *Swift* 35-2. Launched, 1907. Displacement, 2,170 tons. Designed H.P. (T), 30,000. Designed speed, 36 knots. Armament, 4-4 in. Q., and smaller. Two 18 in. torpedo tubes. Fuel capacity, 180 tons oil.
- *Botha, Broke, Faulknor, Tipperary.* Launched, 1912-13. Displacement, 1,430 tons (1,850 full load). Designed H.P. (T), 27,000 = 31 knots. Armament, 6-4 in. Q., 2 machine guns, 4-21 in. tubes. Fuel capacity, 200-407 tons coal + 80 tons oil. (These four boats were originally built for Chili as the *Almirante Goni*, *Almirante Riveros*, *Almirante Rebolledo*, and *Almirante Simpson*, but were taken over for the British Navy on the outbreak of war.)
- *Kempenfeldt, Lightfoot, Marksman, Nimrod* (Flotilla Leaders for the "K," "L," "M," and "N" destroyers). Launched, . Displacement, 1,900 tons (full load). Designed H.P. (T), 29,000 = 32 knots. Armament, 6-4 in. Q. Six 21 in. tubes. Fuel capacity, 210 tons oil.

TORPEDO-BOATS.

- 88-97. Launched, 1893-95. Displacement, 112-172 tons. Designed I.H.P. 1,500-2,500. Speeds 23-24-5 knots. Armament, 3-3 pr. Q. and three torpedo tubes. Coal capacity, 18 to 25 tons.
- 98, 99, 107-117. Launched, 1901-03. Displacement, 178-205 tons. Designed I.H.P. 2,850-2,900. Speeds 25-26 knots. Armament, 3-3 pr. Q. and three torpedo tubes. Coal capacity, 30-40 tons.
- 1-11 Launched, 1906-07. Displacement, 247-263 tons. Designed I.H.P. (T), 3,750. Speeds 27-28-5 knots on service. Armament, 2-12 pr. Q. and three torpedo tubes. Oil capacity, 20-21 tons.
- 13-36. Launched, 1907-08. Displacement, 260-308 tons. Designed I.H.P. (T), 4,000. Speed, 26-27 knots. Armament, 2-12 pr. Q. and three torpedo tubes. Oil capacity, 23-27 tons.

In addition to the above there are a certain number older first-class torpedo-boats, launched between the years 1885-89. They displace from 79 to 125 tons and had trial speeds of 20 to 23-5 knots with 700 to 1,640 I.H.P. Armament, 2 to 6-3 pr. Q. and three to five torpedo tubes.

SUBMARINES.

- A5-A13. Launched, 1904-06. Displacement, 204 tons. I.H.P. 150-500. Speed, 9-12 knots. Armament, two torpedo tubes. 1903 Programme.
- B1, B3-B11. Launched, 1904-06. Displacement, 314 tons. I.H.P. 189-600. Speed, 9-13 knots. Armament, two torpedo tubes. 1904 Programme.

THE BRITISH EMPIRE (*Continued*).

SUBMARINES (*Continued*).

- C1-C10 (1905 Programme), C12-C38 (1906 Programme seven; 1907 twelve; 1908 eight). Launched, 1906-09. Displacement, 316-321 tons. I.H.P. 300-600. Speed, 10-14 knots. Armament, two torpedo tubes. The B. and C. classes have a surface full speed radius of 2,000 miles and a submerged radius of 150 miles.
- CC1-CC2. Launched, 1914. Holland type boats of 400 tons built as *Antofagasta* and *Iquique* for Chilean Navy. Purchased by Canada on outbreak of war.
- D1-D8. Launched, 1908-11. Displacement, 540-595 tons. I.H.P. 550-1,200. Speed, 10-16 knots with twin propellers. Armament, three torpedo tubes. D class has a radius of 4,000 miles. D4 mounts a gun. D1, 1906 Programme; D2, 1908; D3-D8, 1909.
- E1-7. Launched, 1911-13. Displacement, 725-810 tons. I.H.P. 1,750-1,950. Speed, 10-16 knots with twin propellers. Armament, four torpedo tubes and 2-3 in. Q. E1-E6, 1910 Programme; E8-E11, 1911; E12-E18, 1912; E19-7.
- S1-7. Launched, 1913. Fiat San Giorgio type. Displacement, 300-345 tons. I.H.P.— = 18-11 knots. Armament, three torpedo tubes. 1911 Programme.
- W1-7. Laubeuf type, building at Elswick. Displacement 460-685 tons. I.H.P. Speed 17-10½ with twin propellers. Armament, 6 torpedo tubes. 1912 Programme.
- 2 Laubeuf type, building at Elswick for the Turkish Navy, were seized on outbreak of war. Now British W7 and W8. Details as W1-7 above.
- V1-7. Vickers type, building at Barrow. Displacement, 750-1,050 tons. I.H.P. Speed, 19-10 knots, with twin propellers. Armament, 7 torpedo tubes and guns. 1912 Programme.
- *Nautilus*, *Swordfish*, and others. Launched 1913-14. Displacement, 950-1,200 tons. H.P. 5,000 (T) ?. Speed, 20-12 knots. Armament, 6 to 10 torpedo tubes and guns. 1913 Programme. Admiralty "F" design. And others assembled at Messrs. Vickers', Ltd., Yard, Montreal, Canada, in 1915. No details for publication.
- Also an unknown number of captured German submarines in service.
- Torpedo-gunboats—the *Dryad*, *Halcyon*, *Harrier*, and *Hussar* (1893-94) of 1,070 tons, the *Jason*, *Leda* (1892-93) of 810 tons, and the *Gossamer*, *Seagull*, *Skipjack*, *Speedwell*, *Spanker* (1888-90) of 735 tons. They steam, with new boilers and engines, from 19 to 20 knots. Their armament includes 2-4.7 in. Q., 4 or 5-3 pr. or 6 pr. Q., and two to five torpedo tubes. Coal capacity, 100 to 160 tons.
- Gunboats. The "Special Service List" of "unprotected" ships includes the following gunboats and sloops: *Algerine*, *Bramble*, *Britomart*, *Clio*, *Cadmus*, *Dart*, *Dwarf*, *Espiegle*, *Fantôme*, *Merlin*, *Mutine*, *Penguin*, *Racer*, *Research*, *Rinaldo*, *Ringdove*, *Sealark*, *Shearwater*, *Sphinx*, *Thistle*, *Triton*, *Vestal*.

MONITORS AND RIVER GUNBOATS.

- *Humber*, *Mersey*, *Severn*. Launched, 1913. Displacement, 1,260 tons. Designed H.P. 1,450 = 11 knots. Armour belt and protective deck. Armament, 3-6 in. Q., 2-4.7 in. howitzers, 4-3 pr. Q., 6 machine guns. (Originally the Brazilian River Monitors *Javary*, *Madeira*, *Solimoes*, taken over for the British Navy on outbreak of war.)
- Other monitors have been built and improvised for operations off the Belgian and Gallipoli coasts, on the Tigris River, and elsewhere. Very few details of these vessels have been published, but the following vessels and types are known to exist, viz. :—
- *Redoubtable*. No details available.
- *General Crauford*, *Lord Clive*, *Marshal Ney*, *Prince Eugène*, *Prince Rupert*, *Sir John Moore*, and others. High freeboard, "torpedo-proof" cruiser-monitors, armed with two 14 in. guns *en barbette* and some anti-aero guns. M1-M25 and others. Shallow-draught, low-freeboard monitors, armed with one 9.2 in. and one 6 in. Q. guns or with only one 9.2 in. or a 6 in. gun.
- River Gunboats: *Kinsha* (1901), *Moorhen* (1902), *Nightingale* (1897), *Robin*, *Snipe*, *Sandpiper* (1897), *Teal* (1902), *Widgeon* (1905), *Woodcock* and *Woodlark* (1898). They displace 85 to 180 tons, steam 12 to 13 knots, and mount a few small quick-firers and machine guns.
- "Fleet-Messengers" Nos. 1-43 and others. No details available.

MERCANTILE AUXILIARIES, ETC.

Many liners, other ocean-going steamships, colliers, oil-tankers, etc., have been requisitioned and/or converted for war service as armed auxiliary cruisers, fleet-repair ships, depôt-ships for destroyers, submarines, and seaplanes, balloon- and hospital-ships, etc. Others have been employed on patrol and examination service and used for various other duties unspecified.

Between 2,000 and 3,000 trawlers, drifters, yachts, tugs, and motor-craft have been requisitioned or built for war service.

THE BRITISH EMPIRE (Continued).

SEA-GOING FLEET AUXILIARIES.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Speed.	Notes.
—	1911	1912	Adamant	935	1,400	14	Submarine Tender.
—	1911	1912	Alecto	935	1,400	14	Mine-layer. "
—	1890	1892	Andromache	3,400	9,000	20	Mine-sweeper.
—	1893	1894	Antelope	810	3,500	20	Mine-layer.
—	1891	1892	Apollo	3,400	9,000	20	Fleet distilling ship.
—	1902	1903	Aquarius	3,660	1,100	12	Seaplane depôt-ship.
—	1913	1914	Ark Royal	—	—	—	Steam repair ship.
—	1901	1902	Assistance	9,600	4,200	14	Sea-going oil depôt
—	1913	1913	Attendant	—	—	—	Ex-German <i>Tannenfels</i> (captured).
—	—	—	Basilan	—	—	—	Destroyer depôt-ship.
—	1889	1892	Blake	9,000	20,000	21.5	Submarine " "
—	1890	1893	Blenheim	9,000	20,000	21.8	Sea-going oil depôt.
—	1892	1894	Bonaventure	4,360	9,000	20	Submarine " "
—	1911	1912	Burma	3,950	1,200	13	Sea-going oil depôt.
—	1913	1913	Carol (1)	—	450	—	Mine-sweeper. "
—	1892	1893	Circe	810	3,500	19.25	Steam repair ship.
—	1905	1906	Cyclops	11,300	3,500	13.5	Destroyer depôt-ship.
—	—	—	Diligence	7,600	5,000	—	Sea-going oil depôt
—	1913	1913	Ferol (1)	—	—	—	Destroyer depôt-ship.
—	1886	1888	Forth	4,050	5,700	17	Submarine depôt-ship.
—	1894	1894	Hazard	1,070	3,500	20	Repair ship for Destroyers.
—	1892	1893	Hebe	810	3,568	19.2	Mine-layer.
—	1878	1903	Hecla	6,400	2,400	13	" " " "
—	1891	1893	Intrepid	3,600	9,000	19.8	Submarine depôt-ship.
—	1891	1893	Iphigenia	3,600	9,000	20	Submarine " "
—	—	—	Isla	980	650	13	Mine-layer.
—	1899	1900	Kharki	1,645	775	13	Sea-going oil depôt.
—	1892	1893	Latona	3,400	9,000	20	" " " "
—	1882	1884	Leander	4,300	5,000	17	Mine-layer.
—	1911	1912	Maidstone	3,600	2,800	14	Destroyer depôt-ship.
—	1890	1892	Naiad	3,400	9,000	20	Submarine " "
—	—	—	Olaf (1)	—	3,200	—	Mine-layer.
—	—	—	Olivia (1)	—	3,300	—	Sea-going oil-depot.
—	—	—	Oloa (1)	—	3,200	—	" " "
—	1913	1913	Olympia	—	2,500	—	" " "
—	1897	1899	Pactolus	2,135	7,000	20	Submarine depôt-ship.
—	1903	1904	Petroleum	9,900	2,000	13	Sea-going oil depôt.
—	—	—	Reliance	—	—	—	Repair ship.
—	1898	1899	Rosario	980	1,400	13.5	Submarine depôt-ship.
—	1913	1914	Safeguard	875	1,350	—	Coast-guard Cruiser
—	1913	1914	Servitor (1)	—	450	—	Sea-going oil depôt
—	1892	1894	St. George	7,700	12,000	20.25	Destroyer depôt-ship.
—	1891	1893	Spartan	3,600	9,000	20.4	" " "
—	1885	1887	Thames	4,050	5,700	17	" " "
—	1890	1892	Thetis	3,400	9,000	20	Mine-layer.
—	—	—	Trefoil (1)	—	1,600	—	Sea-going oil depôt.
—	—	—	Turmoil (1)	—	1,500	—	" " "
—	1878	1879	Tyne	3,560	1,200	11.5	Destroyer depôt-ship.
—	1889	1891	Vulcan	6,620	12,000	20	Submarine
—	1911	1911	Watchful	560	800	12	Mine-Sweeper " "
—	—	—	—	—	—	—	Cruiser.
—	1912	1913	Woolwich	3,380	2,600	13.25	Destroyer depôt-ship.

Most of the above carry an effective anti-torpedo craft armament, many of them mounting several weapons of 6 in. or 4.7 in. calibre.

(1) These will be propelled by internal-combustion engines.

ARGENTINE

5 BATTLESHIPS—5 COMPLETE.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armour Inches.					Coal Capacity.	Armament.	
							A	B	C	D	E		Guns.	Tubes.
1	1880	1882	Almirante Brown (1)	4,267	4,500	13.75 T	9	1½	8	8	—	650	10-5.9 in. Q. 4-4.7 in. Q. 10 Smaller Q.	nil
2	1890	1892	Libertad	2,336	3,000	14	8	2	—	8	2	340	2-9.4 in. 4-4.7 in. Q. 8 Smaller Q.	2
3	1891	1893	Independencia											
4	1911	1914	Moreno	27,940	39,500	22.5	12	2½	8	10	6	1000	12-12 in. 12-6 in. Q.	0
5	1911	1914	Rivadavia (2)									4000	12-4 in. Q.	4
4 ARMOURED CRUISERS.														
1	1895	1896	Garibaldi	8,732	13,000	20	3-6	1½	6	6	1000	{	2-10 in. 10-6 in. Q. 6-4.7 in. Q. 24 Smaller Q.	4
2	1896	1898	San Martin (3)	6,773										
3	1897	1899	Belgrano (4)	7,069										
4	1898	1901	Pueyrtdon	6,773										

4 ARMoured CRUISERS.

1	1895	1896	Garibaldi	6,732	13,000	20	3-6	1½	6	6	1000	{	2-10 in.
2	1896	1898	San Martin (3)	6,773									10-6 in. Q.
3	1897	1899	Belgrano (4)	7,069									6-4.7 in. Q.
4	1898	1901	Pueyrdon	6,773									24 Smaller Q.

NOTE.—(1) *Almirante Brown* now employed as a gunnery training-ship. (2) Load displacement, 30,200 tons. (3) *San Martin* has 4-8 in. Q. in place of 2-10 in. (4) *Belgrano* has 14-6 in. Q., and no 4.7 in. Q.

2 Old Monitors.—*El Plata*, *Los Andes* (1875), 1,677 tons, I.H.P. 750=9 knots, armour belt 3.5 in. to 6 in. iron, single turret 8 in., deck 1 in. Armament, 2-8 in. B., 2-6 pr. Q., and 4 machine. Coal capacity, 120 tons. (Both now used for subsidiary service.)

2 Armoured Gunboats.—*Parana*, *Rosario*. Launched, 1908. Displacement, 1,000 tons. I.H.P. 2,000=15 knots. Armament, 2-6 in. howitzers, 6-12 pr. Q., 8 machine guns.

3 Light Cruisers.—*25 de Mayo*. Launched, 1890. Displacement, 3,200 tons. I.H.P. 13,800=22.43 knots on trial. Armament, 2-8 in., 8-4.7 in. Q., and 24 smaller; three torpedo tubes. Coal capacity, 600 tons. Built at Elswick. (Now used as Stokers' Training-Ship.)

Nuevo de Julio. Launched, 1892. Displacement, 3,570 tons. I.H.P. 14,350=22.74 knots on trial. Armament, 4-6 in. Q., 8-4.7 in. Q., and 24 smaller Q.; five torpedo tubes. Coal capacity, 770 tons. Built at Elswick.

Buenos Aires. Launched, 1895. Displacement, 4,780 tons. I.H.P. 17,000=23.2 knots on trial. Armament, 2-8 in. Q., 4-6 in. Q., 8-4.7 in. Q., and 22 smaller Q.; five torpedo tubes. Coal capacity, 1,000 tons. Built at Elswick.

1 Old Cruiser.—*Patagonia*. Launched, 1885. Displacement, 1,419 tons. I.H.P. 2,400=14 knots. Armament, 1-6 in. Q., 1-4.7 in. Q., 8-3 pr. Q., and no tubes. Built at Trieste. (Now used as a Training-Ship.)

1 Training Cruiser.—*Presidente Sarmiento* (1897), 2,750 tons. Speed, 13.5 knots. Armament, 5-4.7 in. Q., 2-14 pr. Q., 12 smaller Q., and two torpedo tubes. Coal capacity, 300 tons.

2 Torpedo Gunboats.—*Espora* (1890, 520 tons), *Patria* (1893, 1,070 tons). About 20 knots speed. Armament, a few small guns and five torpedo tubes. *Espora*, only one tube. (*Espora* now used for subsidiary duties and *Patria* for surveying service.)

7 Destroyers.—*Cordoba* 34.7, *La Plata* 36.8, by Schichau, *Catamarca*, *Juguy*, by Krupp. Displacement, 890-1010 tons. Designed I.H.P. (T) 18,000 to 20,000. Designed speed, 32 knots. Armament, 4-4 in. Q., 3-9 pr. Q., and four torpedo tubes. *Misiones*, *Corrientes*, *Entre Rios* (1896). 280 tons and 27 knots speed. Armament, 1-14 pr. Q., 5 smaller Q., and three tubes. All steamed well on trial.

47 Torpedo Boats.—Eight first-class, 85-110 tons. Launched, 1890-91. Speeds, 23-24.5 knots. Armament, 2-3 small guns and three torpedo tubes. Twenty-one boats of 200 to 250 tons to be built. There are four 52-ton second-class boats, ten 16-ton third-class boats, and four old vedette boats.

Miscellaneous Auxiliaries.—There are eight transports, eight river steamers, five despatch vessels, and various other old ships used for subsidiary duties. The most modern vessels are: *Ministro Escurrea* (1914), 2,600 tons. H.P. 1,243=10.5 knots. Oil-fuel transport. *Alferez Mackinlay* (1914), 783 tons. H.P. 520=10 knots. *Vicente Fidel Lopez* (1906), 725 tons. H.P. 480=9.3 knots. *Ona* (1913) and *Querandi* (1914), 615 tons. H.P. 1,200=11 knots.

AUSTRIA-HUNGARY.

CAPITAL-SHIPS.

Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
							A	B	C	D	E		Guns.	Tons
1903	1906	Erzherzog Karl	10,433	14,000	19.25	20.36						550	4.9 in.	0
1904	1906	Erzherzog Friedrich				20.57	6	2	5	9½	6		12-7.6 in. Q.	
1905	1907	E. Ferdinand and Max				20.76	8½	2½					14-3 in. Q.	2
1908	1910	Erzherzog Franz-Ferdinand	14,268	20,000	20							750	4-12 in.	0
1909	1911	Radetzki				20.58	9	1½	6	9½	5		8-9.4 in.	
1910	1911	Zrinyi											20-3.9 in. Q.	3
1911	1912	Viribus Unitis (1)	20,000	25,000 (T)	20	21.2						900	6 Smaller Q.	
1912	1913	Tegetthoff				20.7	11	1½	8	11	6½		12-12 in.	0
1912	1914	Prinz Eugen											12-5.9 in. Q.	
1913	1915	Szent-Istvan											18-14 pr. Q.	4
1915	—	VIII (2)											4 Smaller.	
1915	—	IX (2)	24,500	— (T)	21							—	10-14 in.	
?	—	X (2)											5.9 in. Q.	
?	—	XI (2)												

Battleships of Questionable Fighting Value.

1902	1904	Badenberg	8,208 (3)	15,000	18.5	19.67	8½	2½	4	7	5	500	3-9.4 in.	0
1901	1903	Arpad				19.65							12-6 in. Q.	
1900	1902	Hapsburg				19.64							10-3 in. Q.	2
1896	1897	Budapest	5,462	8,500	17	17.9	4½	2½	3	5	3	300	4-9.4 in.	4
1895	1898	Monarch				17.5	10½						6-6 in. Q.	
1895	1897	Wien				17.6							15 Smaller Q.	

- (1) The last two ships of this class have six submerged tubes.
 (2) Construction of these four ships very doubtful. One was reported to have been seriously damaged on stocks by fire about Sept. 1914.
 (3) These three ships have been reconstructed in 1912-14, and probably displace less now.

CRUISERS.

ARMoured CRUISERS.

1893	1895	K. Maria Theresa	5,187	9,000	19	19.3	4	2½	4	4	4	600	2-7.6 in. Q.	4
												740	8-6 in. Q.	0
												500	22 Smaller Q.	0
1898	1900	Kaiser Karl VI.	6,151	12,000	20	20.83	8½	2½	3½	8	3	820	2-9.4 in.	2
													8-6 in. Q.	
													28 Smaller Q.	0
													2-9.4 in.	
1903	1906	St. George	7,185	12,300	21	22	6½	3½	5½	5-8	5	600	5-7.6 in. Q.	0
												1000	4-8 in. Q.	
													8-3 in. Q.	2
													9 Smaller Q.	

AUSTRIA-HUNGARY (Continued).

LIGHT CRUISERS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Coal Capacity.	Armament.	
									Guns.	Tubes.
1887	1889		Tiger	1,649	6,000	18.5	18.3	200	4-4.7 in. Q.	1
1886	1888		Leopard	1,506			18.4	250	10 Smaller Q.	0
1886	1887		Panther				18.5	400		4
1889	1890		K. Franz Josef I.	3,966	8,000	19	19.1	660	8-6 in. Q.	0
								470	19 Smaller Q.	1
1899	1901		Szigetvar	2,313	7,000	20	20.7	500	8-4.7 in. Q.	0
1899	1901		Aspern	2,362			20.54	450	12 Smaller Q.	2
1909	1910		Admiral Spaun (1)	3,500	20,000 (T)	26	27.07	850	7-3.9 in. Q.	0
								450	2 Smaller Q.	2
1912	1913		Saida (1)	3,500	25,000 (T)	27		450	9-3.9 in. Q.	0
1912	1914		Helgoland (1)					850	4 Smaller Q.	2
1913	1914		Novara (1)					850		0

(1) One of these scout-cruisers was sunk on January 13th, 1916, by the French submarine *Foucault*. Three other light cruisers M, L, K, were projected, but it is doubtful if any have been laid down. One was to have been built at Monfalcone Yard, now held by Italian Army.

DESTROYERS

- *Scharfschutze, Streiter, Ulan, Uskoke, Wildfang, Turul, Csikos, Pandur, Reka, Velebit, Dinara, Huszar.* Launched, 1905-08. Displacement, 384 tons. Designed I.H.P. 6,000 = 28.5 knots. Armament, 6-11 pr. Q., and two 18 in. torpedo tubes. Coal capacity, 90 tons.
 - *Balaton, Csepel, Orgen, Tatra.* Launched 1912-1913. Displacement, 806 tons. I.H.P. (T) 17,000 = 32.5 knots. Armament, 2-3.9 in. Q., 4-11 pr. Q., and two 21 in. torpedo tubes. Oil capacity, — tons.
 - *Varasdinier.* Launched, 1914. Displacement, 386 tons. Designed H.P. = knots (Turbines). Armament, 6-11 pr. Q., and torpedo tubes. Fuel capacity tons.
- Twelve destroyers (part commenced, others projected). Launched (1914?) Designed displacement, 400 tons. Designed H.P. 6,000 = 30 knots. Designed armament, 1-12 pr. Q., 7-3 pr. Q., 4-18 in. torpedo tubes. (Some of these destroyers were commenced by the Stabilimento Tecnico, Trieste, for the Chinese Navy, but progress with construction is uncertain. *Varasdinier*, as given above, may be one of these ex-Chinese destroyers.)
- I-III. Launched (?). Displacement, 1,800 tons. Designed H.P. 36,000 = 32 knots (A.E.G. turbines). Oil capacity, 130 tons. Armament, 10-4 in. Q., 4-3 pr. Q., 4-18 in. torpedo tubes. (These three vessels were laid down at the Monfalcone Yard of the Cantieri Navale Triestino for the Chinese Navy early in 1915. The Monfalcone Yard was partly dismantled and destroyed by Austrian troops before the evacuation. Official Italian Army reports have mentioned severe fires in the dockyard caused by Austrian bombardments. The three ex-Chinese "cruiser-destroyers" or "flotilla-leaders" have probably been destroyed.)

TORPEDO-BOATS

- 74T-81T, 82F-97F, 98M-100M. Displacement, 250 tons. Launched, 1913-14. I.H.P. 5000 = 28.5 knots. Armament, 2-11 pr. Q. and three torpedo tubes. Others of this type building at outbreak of war.
- 50E, 51T-63T, 64F-73F. Launched, 1905-09. Displacement, 197 tons. Designed I.H.P. 3,000 = 25 knots. Armament, 4-3 pr. Q. and two torpedo tubes. Coal capacity, 30 tons.
- Nos. 1-12. Launched, 1909-10. Displacement, 250 tons. Designed I.H.P. 5,000 = 28 knots. Armament, 2-3 pr. Q. and three torpedo-tubes. Coal capacity, ? tons.

AUSTRIA-HUNGARY (Continued).

TORPEDO-BOATS (Continued)

- Nos. 13-18. Launched, 1896-99. Displacement, 130-152 tons. Designed I.H.P. 1,800=26 knots. Armament, 2-3 pr. Q. and two or three torpedo tubes. Coal capacity, 30 tons.
- About 20 old first-class boats of 78-95 tons displacement, built between 1886-90. Original speeds, 19-20 knots. Armament, 2-3 pr. Q. and two torpedo tubes. Some used for subsidiary harbour duty as tenders and others as mine-sweepers.

SUBMARINES

- U1-U2. Lake type. Launched, 1908-9, at Pola. Displacement, 210-240 tons. I.H.P. 720-200. Speeds, 12½ and 7½ knots. Armament, three torpedo tubes.
- U4. Germania type. Launched, 1908. Displacement, 237-300 tons. I.H.P. 600-320. Speeds, 12 and 8½ knots. Armament, two torpedo tubes. Built at Kiel.
- U5-U6. Holland type, built at Fiume. Launched, 1908-09. Displacement, 235-268 tons. I.H.P. 560-230. Speeds, 11½ and 8½ knots. Armament, two torpedo tubes.
- U7-U11. Germania type. Launched, 1911-14. Displacement 685-860 tons. I.H.P. . . . Speeds 18 and 10 knots. Armament, 2 guns and 5 torpedo tubes.
- U?. Krupp-Germania type. Reassembled in Austrian dockyards. No details, but probably of C and D types given for German submarines (q.v.).
- U?. Whitehead-Fiume type. Large submersibles armed with 2 guns, two fixed torpedo tubes in bows and two revolving deck tubes.
- U? (captured French submarine *Curie*). Displacement, 390-550 tons. I.H.P. 840-434. Speeds, 12-5 and 7-8 knots. Armament, 7 tubes. Seven torpedo-gunboats, *Blitz*, *Komet*, *Magnet*, *Meteor*, *Planet*, *Satellit*, *Trabant*. Launched, 1887-96. Displacements, 350-510 tons. I.H.P. 2,600-5,000=21-26 knots original speed. Armament, last three, 2-12 pr. Q., 8-3 pr. Q., and three torpedo tubes, the remainder 6 or 9-3 pr. Q. and three or four torpedo tubes.

DANUBE RIVER MONITORS, Etc.

(NOTE.—An unidentified monitor included in following list has been sunk.)

Leitha, *Mayos* (1871, reconstructed 1894). Displacement, 310 tons. H.P. 700 = 8 knots. Armament, 1-4-7 in. Q., 3 machine guns.

Koros, *Szamos* (1892). Displacement, 448 tons. H.P. 1,200 = 10 knots. Armament, 2-4-7 in. Q., 2-11 pr. Q., 2 machine guns.

Bodrog (1904). Displacement, 440 tons. H.P. 1,400 = 13 knots. Armament, 2-4-7 in. Q., 1-4-7 in. howitzer, 2-3 pr. Q., 1 machine gun.

Enns (1914), *Inns* (1915). Displacement, 536 tons. H.P. 1,500 = 12 knots. Armament, 2-4-7 in. Q., 3-4-7 in. Q., howitzers, 2-11 prs. Q., 6 machine guns.

Other monitors building.

NOTE.—It is quite feasible for small monitors and similar shallow-draught vessels to be built at Antwerp and Zeebrugge, and be sent to the Danube and Black Sea by canals and the Rhine. Some years ago, two Roumanian river-monitors, built in England, travelled in this way to Galatz, near the mouth of the Danube in the Black Sea.

Also 7 motor patrol boats for the Danube, 12-40 tons. Displacement, 14-22 knots speed, armed with 3 pr. Q., and machine guns. Others are building and a certain number of motor launches, etc., have been requisitioned or bought for war service on the Danube.

AUSTRIA-HUNGARY (Continued).

SEA-GOING FLEET AUXILIARIES.

Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armament.	Notes.
1873	1895	Aurora	1,340	—	11	2 Machine Guns	Mine-Layer.
1903	1903	Basilisk	314	600	12	4 Machine Guns	Mine-Tender
1913	1914	Camaleon	1,100	5,500	11	4-3.9 in. Q.	Mine-Layer
1871	1872	Cyclops	2,150	850	11	2-3.5 in. B.	Fleet Repair-Ship
1871	1873	Delta	1,340	—	11	2 Machine Guns	Mine-Layer
1891	1892	Dromedar	173	350	10	3-1 pr. Q.	Mine-Tender
1891	1892	Gaea	10,500	16,400	19	4-4.7 in. Q., 4-3 in. Q.	Torpedo Depot-Ship
1889	1890	Gigant	260	400	11	—	Submarine Tender
1910	1911	Herkules	1,500	2,500	15	—	Sea-going Oil-Depôt
1891	1892	Pelikan	2,440	4,700	18	2-10 pr. Q., 8-3 pr. Q.	Submarine Depot-Ship
1913	1914	Pola	12,000	6,200	14	—	Fleet-Collier
1891	1892	Salamander	268	350	10	2-3 pr. Q.	Mine-Tender
1914	1915	Teodo	12,000	6,200	14	—	Fleet-Collier
1892	1893	Vetsa	3,880	1,200	12	—	Sea-going Oil-Depôt
1910	1910	Vulcan	950	1,200	15	4-3 in. Q.	Submarine Tender

ARMED AUXILIARIES, Etc.

Various mercantile ships, yachts, and motor craft have been requisitioned for war service as fleet and flotilla-tenders, mine-layers, and mine-sweepers, patrol boats, hospital ships, etc.

BRAZIL.

5 BATTLESHIPS—4 COMPLETE.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armour Inches.					Coal Capacity.	Armament.	
							A	B	C	D	E		Guns.	Tubes.
1	1898	1900	Deodora	3,112	3,400	15	4	11	—	8	3	236	2-9.4 in.	0
2	1899	1901	Floriano				13½	—	—	—	—		4-4.7 in. Q. 10 Smaller Q.	2
3	1909	1910	São Paulo	19,281	24,500 (T)	{ 21.62 21.43 }	9	2½	9	9	6	900	12-12 in.	0
4	1908	1910	Minas Geraes									2400	22-4.7 in. Q. 8-3 pr. Q.	4
5	?	—	Riachuelo (1)	30,500	45,000 (T)	21	13½	—	—	13½	—	—	8-15 in. 14-6 in. Q. 10-4 in. Q.	0 — 2

(1) This ship was laid down at Elswick in June 1914, but it is not known if her construction was proceeded with after the beginning of the war.

BRAZIL (Continued).

Tamandare (1890), 4,680 tons. I.H.P. 7,500 = 17 knots. Armament, 10-6 in. Q., 2-4-7 in. Q., and 8 smaller Q.; eight torpedo tubes.

Republica (1892), 1,300 tons. I.H.P. 3,400 = 17-4 knots. Armament, 6-4-7 in. Q. and 10 smaller Q.; four torpedo tubes. Converted into a mine-layer.

Benjamin Constant (1892), 2,707 tons. I.H.P. 2,800 = 15 knots. Armament, 4-6 in. Q., 8-4-7 in. Q., 8-3 in. Q., and six smaller Q.; four torpedo tubes. Built as a training ship and full rigged, but is used as a cruiser.

Barroso (1896), 3,600 tons. 7,500 = 20 knots. Armament, 6-6 in. Q., 4-4-7 in. Q., 20 smaller Q., and three torpedo tubes.

Bahia (27-016), *Rio Grande do Sul* (27-412) (1909). Displacement, 3,000 tons. I.H.P. (T). 18,000 = 26-5 knots. Armament, 10-4-7 in. Q., 6-6 pr. Q., and two torpedo tubes.

Two more light scout-cruisers were reported to have been contracted for by Armstrongs, Elswick, in July 1914. Doubtful if their construction was ever begun.

2 Old Cruisers.—*Paysandu* (1877, 1,191 tons) and *Tonelero* (1873, 1,414 tons). Speed, 13 knots. Armament, first, 9-6 in. M. and eight small Q.; second (re-armed 1895), 7-4-7 in. Q. and eight smaller Q.

4 Torpedo Gunboats.—*Tupy*, *Timbyra* (1896), *Tamoyo* (1898), 1,030 tons; I.H.P. 6,000 = 22 knots. Armament, 2-4-7 in. Q. and eight smaller Q.; three tubes. *Gustavo Sampaio* (1893), 500 tons. I.H.P. 2,300 = 18 knots. Armament, 2-20 pr. Q., four smaller Q., and three tubes.

10 Destroyers.—*Alagoas* (27-253), *Amazonas* (27-178), *Matto Grosso* (27-16), *Para* (27-58), *Parana* (28-736), *Piauihy* (27-211), *Parahyba* (27-29), *Rio Grande del Norte* (27-275), *Santa Catarina* (27-305), *Sergipe* (27-605). Launched, 1908-10, by Messrs. Yarrow & Co. Length, 240 ft.; beam, 23 ft. 6 in. Displacement, 550 tons. I.H.P. 8,000 = 27 knots. Armament, 2-4 in. Q., 4-3 pr. Q., and 18 in. two tubes. Coal capacity, 140 tons.

22 Torpedo-Boats.—*Goyaz* (26-49), *Gonzalez* (26-5), *Pedro-Ivo*, *Silvado*, of 130-150 tons, 26 knots, 2-3 tubes. Launched, 1892-1908. Eighteen small vessels of no war-value.

3 Submarines.—F1-F3, Fiat type similar to Italian *Argo* class. Launched, 1913-14. Displacement, 250-370 tons. I.H.P. . . . Speeds, 14 and 8 knots. Two torpedo tubes.

1 Submarine Depot-Ship *Caera*. Launched, 1913. Displacement, 3,800 tons. H.P. 4,200 (Diesel motors) = 13½ knots. Armament, 4-4 in. Q. and 4 smaller guns. Fitted with salvage cranes and has central dock 190 feet long, 23 ft. diameter between double hulls.

33 Gunboats. *Tiradentes* (1892), 800 tons, 14-7 knots, and eleven guns, *Parahyba* (838 tons), *Primeiro de Marco* (726 tons), and twelve others of 137 to 268 tons. Speeds, all about 8 knots. Various armaments of small quick-firers. Also five river monitors of 340-470 tons. Thirteen river gunboats of no war-value, small displacement and light armament.

BULGARIA.

The only important ship is the torpedo gunboat *Nadesda* (1898), of 715 tons. I.H.P. 2,600 = 18-85 knots on trial. Armament, 2-3-9 in. Q., 3 smaller Q., and 2 torpedo tubes. *Khrabri*, *Bistri*, *Smeli*, *Dree*, and two other torpedo-boats launched in 1907-10 in France, transported and put together at Varna. Displacement, 100 tons. I.H.P. 2,000 = 26 knots. Armament, 3-3 pr. Q. and 3 tubes. Also three of 97½ tons launched 1904-05. I.H.P. 1,900 = 24 knots. Armament, the same as *Khrabri*. There are two armoured gunboats on the Danube, and a dozen smaller steamers included in the fleet.

CHILI.

BATTLESHIPS—2 COMPLETE.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armour Inches.					Coal Capacity.	Armament.	
							A	B	C	D	E		Guns.	Tubes.
1	1890	1893	Capitan Prat	6,981	12,000	18.3	12	3	4	10½	2	400 1100 1000 3500	4-9.4 in. 8-4.7 in. Q. 25 Smaller Q. 10-14 in. 16-6 in. Q.	4 0 4
2	1914	1915	Almirante Cochrane	28,000	37,000 (T)	22	11	3	8-11	11	7			
2 ARMOURD CRUISERS.														
1	1896	1897	Esmeralda	7,020	16,000	23	6	2	—	4½	—	500 1350	2-8 in. Q. 16-6 in. Q. 8-3 in. Q. 19 Smaller Q.	1 2
2	1897	1898	O'Higgins	8,500	16,000	21.5	5-7	2	—	6-7½	6	700 1260	4-8 in. Q. 10-6 in. Q. 4-4.7 in. Q. 10-3 in. Q. 14 Smaller Q.	0 2

- 1 Old Battleship.—*Almirante Cochrane* (1874), 3,500 tons. I.H.P. 2,920=12 knots. Armour, 4.5-9 in. iron belt, 8 in. central battery, deck 2-3 in. Armament, 6-8 in. Armstrong B., 4-4.7 in. Q., 11 small Q., and four tubes. Coal capacity, 254-330 tons. This ship is used as torpedo and gunnery school ship for officers and men. Will have her name changed.
- 3 Light Cruisers.—*Blanco Encalada* (1893), 2,400 tons. I.H.P. 14,500=22.5 knots. Armament, 2-8 in. Q., 16-6 in. Q., and 12 smaller Q. Five tubes. *Chacabuco* (1898), 4,500 tons. I.H.P. 15,500=24.75 knots. Armament, 2-8 in. Q., 10-4.7 in. Q., and 19 smaller Q. Five tubes. *Ministro Zenteno* (1896), 3,600 tons. I.H.P. 6,500=20 knots. Armament, 8-6 in. Q. and 14 smaller Q. Three tubes.
- 2 Training Cruisers.—*General Baquedano* (1898), 2,330 tons. I.H.P. 1,500=13.7 knots on trial. Armament, 4-4.7 in. Q., 2-3 in. Q., and five smaller Q. One tube. *Presidente Errazuriz* (1890), 2,047 tons. I.H.P. 5,400=19 knots. Armament, 4-6 in. Q., 2-4.7 in. Q. and 10 small Q. Three tubes.
- 2 Torpedo Gunboats.—*Talcahuano* (ex *Almirante Condell*), *Tomé* (ex *Almirante Lynch*) (1890), 750 tons, and 21 knots. Armament, 8-6 pr. Q., and five tubes.
- 8 Destroyers.—*Captan Orella*, *Captan Munoz Gamero*, *Teniente Serrano*, *Guardia-Marina Riquelme* (?1896), *Captan Merino Tarpa*, *Captan O'Brien* (1901), 300-350 tons. Speed, 30 knots. Armament, 1-3 in. Q., 5-8 pr. Q., and two tubes. Coal capacity, 90 tons. *Almirante Lynch*, *Almirante Condell*. Launched, 1912-14. Displacement, 1,850 tons. I.H.P. (T) 27,000=31 knots. Armament, 6-4 in. Q., 2 machine and three 18 in. torpedo-tubes. Fuel capacity, 570 tons.
- 19 Torpedo-Boats.—Six first-class of 130 tons and 27 knots speed, carrying 3-3 pr. Q. and three tubes. Thirteen smaller obsolete boats. Finally, several old gunboats and harbour craft possessing absolutely no fighting value.

CHINA.

6 LIGHT CRUISERS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Speed.	Coal Capacity.	Armament.	
								Guns.	Tubes
1	1897	1898	Hai-Yung	2,950	7,500	19.5	200	3-5.9 in. Q.	2
2	1897	1898	Hai-Chu				500	8-4 in. Q.	1
3	1898	1898	Hai-Chen					13 Smaller Q.	
4	1898	1900	Hai-Chi	4,300	17,000	24	400	2-8 in. Q.	5
							1000	10-4.7 in. Q.	0
								22 Smaller Q.	
5	1911	1912	Ying-Swei	2,500	6,000 (T)	20	250	2-6 in. Q.	2
6	1912	1913	Chao-Ho	2,850			600	4-4 in. Q.	0
								10 Smaller Q.	

4 Destroyers.—*Fu-po*, *Fu-Yun*, *Chang-Feng*, 400 tons. Built at Schichau's Yard, Elbing, 1912. *Lung-Tuan* 400 tons, built at the Stabilimento Tecnico di Trieste. Speed 30-32 knots. Armament, 2-12 pr. Q., 4-3 pr. Q. and two torpedo tubes.

3 Torpedo Gunboats.—*Kien-Wei* (1900), *Kien-Ngan* (1899), 861 tons. I.H.P. 7,000 = 22.5 knots. Armament, 1-3.9 in. Q., 9 smaller Q. and 2 torpedo tubes. Coal capacity, 360 tons. *Fei-ying* (1897), 850 tons. I.H.P. 8,000 = 22 knots. Armament, 2-3.9 in. Q., 10 smaller Q., and three torpedo-tubes. Coal capacity, 150 tons.

15 Gunboats.—*Tschutai*, *Tschutung*, *Tschuju*, *Tschuhai*, *Tschujo*, *Tschukuan*. Launched in Japan, 1906-07. Displacement, 570 tons. I.H.P. 1,350 = 13 knots. Armament, 2-4.7 in. Q., 2-3 in. Q., 4 machine guns. *Kiangjuan*. Launched, 1904. Displacement, 565 tons. I.H.P. 950 = 14.7 knots on trial. Armament, 1-4 in. Q., 2-3 pr. Q., 4 machine guns. *Kianghen*, *Kiangtschen*, *Kiangli*. Launched, 1907. Displacement, 570 tons. I.H.P. 950 = 13.5 knots. Armament, 1-4.7 in. Q., 1-3 in. Q., 4-3 pr. Q., and 4 machine guns. *Jung-Fung*, *Jung-Tschiang*, *Jung-Hsiang*. Launched in Japan, 1912. Displacement, 780 tons. I.H.P. — = 13 knots. Armament, 2-4.7 in. Q., 4-3 in. Q., 4 machine guns. *Feihu*, *Fei-lung*. 1,000 tons. Speed, 14 knots. Building in China.

6 River Gunboats.—*Kiangtschi*, *Kiangku*, *Kiangkung*, *Kiangta*. Launched, 1908. Speed 14 knots. Armament, 5 small guns. *Tschiang-kun* and *Tsin-Pei*. Launched (Germania Yard), 1911-1912. Displacement, 149 tons. I.H.P. 500 = 13 knots. Armament, 7 small guns.

7 or 8 Torpedo-Boats.—*Hupeng*, *Hungo*, *Huchang*, *Huying*. Launched, 1906-07, in Japan. Displacement, 97 tons. I.H.P. 1,200 = 23.5 knots. Armament, 2-3 pr. Q., and three torpedo tubes. Also three or four obsolete torpedo-boats.

There are a score of other cruising vessels of little value, but the above probably represents the entire effective Chinese Navy.

DENMARK.

6 COAST DEFENCE BATTLESHIPS—5 COMPLETE.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armour Inches.					Coal Capacity.	Armament.	
							A	B	C	D	E		Guns.	Tubes
1	1886	1889	Iver Hvitfelt	3,208	5,100	15.6r.	11.5	2.1	—	8.5	—	250	2-10.2 in. B. 4-4.7 in. B. 12 Smaller Q.	4
2	1896	1899	Skjold	2,115	2,200	13	9-12	2	—	7.8	5	280	1-9.4 in. B. 3-4.7 in. Q. 6 Smaller Q.	4
3	1899	1901	Herluf Trolle	3,493	4,200	16	4-7	2	—	7	5.9	250	2-9.4 in. B. 4-5.9 in. Q. 18 Smaller Q.	0
4	1903	1905	Oluf Fischer	3,593										—
5	1908	1909	Peder Skram	3,676										3
6	Bldg	—	Niels Juel	3,675	5,400	16	4-8	2	—	7	5.9	—	2-9.4 in. B. 4-5.9 in. Q. 18 Smaller Q.	0 — 4

2 Light Cruisers.—*Geiser* (1892), *Héimdal* (1894), 1,260 tons. I.H.P. 3,000=17 knots. Armament, *Hekla*, 2-5.9 in. B., ten small Q., and five tubes; others, 2-4.7 in. Q., 4-3.4 in. Q., six machine, and four tubes. Coal capacity, 125 tons.

1 Obsolete Cruiser.—*Valkyrien* (1888, 2,900 tons). Speeds, 12-14 knots. Armed with several Krupp breech-loaders and a few small quick-firers.

6 Gunboats.—*Falster* (1873), *Oresund* (1874), *Lille Belt* and *Store Belt* (1875), 240-360 tons, 3-9 knots and 1-10 in. Armstrong M., 2-3.4 in. B., and four machine. *Gronsd* (1883), *Guldborgsund* (1884), 215 tons, 11.5 knots, 2-4.7 in. B. and two machine.

1 Torpedo Transport.—*Beskytteren* (1900), 389 tons, 12 knots, 3-3 pr. Q.

7 Gunboats.—Seven old gunboats, used as training or surveying ships.

9 Destroyers.—*Soridderen*, *Tumleren*, *Windhunden*, *Sparkhuggeren*, *Souhnen*, and *Flyvesishen*. 1, launched, 1911-12. Displacement, 230 tons. I.H.P. (turbines) 5,000=27 knots. Armament, 2-12 pr. Q. and 5 torpedo tubes. Coal, 80 tons. *Delfinen*, *Hvalrossen*, *Svaerdfisken*. Launched 1914. Displacement, 182 tons. I.H.P. turbines 3,500=27 knots. Armament, 1-12 pr. Q. and 4 torpedo tubes.

6 Torpedo-Boats.—105-142 tons, 23 knots, and three to four tubes, built 1887-1907.

14 Submarines.—*Dykkeren*. Launched, 1909, at Spezia. Displacement, 103-130 tons. Speeds, 12-7½ knots. Armament, two torpedo tubes. *Aegir*, *Galathea*, *Neptun*, *Ran*, *Triton* (Displacement, 185-235 tons), *Havmanden*, *Haufruen*, *Nymfen*, *Najaden*, *Thetis*, 2 April (displacement, 170-200 tons). Launched, 1912-14. H.P. of all, 450-275. Speeds 13 knots on surface and 8 knots submerged. Armament, 2 torpedo tubes, Whitehead-Fiume type.

3 others building, 450 tons displacement, similar to *Havmanden* type as given above.

1 Mine-Layer.—*Lossen* (1910). Displacement, 500 tons. Designed H.P. 900=11 knots speed. Armament, 3-3 pr. Q.

ECUADOR.

Libertador Bolivar (ex *Almirante Simpson*) (1896), 812 tons and 21 knots. Armament, 2-4.7 in. Q., 4 smaller Q., and three tubes. Purchased from Chili, 1908.

Two old despatch vessels, *Papin* and *Inconstant*, of 891 tons. A few insignificant gunboats.

FRANCE.

BATTLESHIPS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes.
—	1893	1896	Jauréguiberry	11,637	14,300	17.75	18.07	17½	2½	4	14	4	750		
													1000	2-12 in.	
													600	2-10.8 in.	2
—	1893	1897	Charles Martel	11,693	14,500	18	18.1	17½	2½	4	6-	4	1000	8-5.5 in. Q.	2
											14½		500	28-32	
														Smaller Q.	
—	1894	1896	Carnot	11,954	15,000	18	17.86	17½	2½	4	13½	4	700		
													680	4-12 in.	
—	1895	1898	Charlemagne	11,108	14,500	18	{ 18.13 18.2 18.47 }	14	2½	3-4	8-	4-5	1100	10-5.5 in. Q.	0
—	1896	1898	Gaulois	11,105										8-3.9 in. Q.	4
—	1896	1900	St. Louis	11,090										20 Smaller Q.	
													820	2-10.8 in.	0
—	1897	1899	Henri IV.	8,807	11,500	17.5	17.28	8-	3	4½	10-	4½	1100	7-5.5 in. Q.	2
								11			11½		1100	14 Smaller Q.	2
													1100	4-12 in.	2
—	1899	1903	Suffren	12,527	16,200	18	18	12	3	3½	8-	5½	1820	10-6.4 in. Q.	2
										5½	13		1820	8-3.9 in. Q.	2
														30 Smaller Q.	
—	1902	1906	République	14,635	18,000	18	{ 19.15 19.12 }	11	3	—	9-	6-	905	4-12 in.	0
—	1903	1907	Patrie										1825	18-6.4 in. Q.	2
														28 Smaller Q.	
—	1904	1908	Démocratie	14,640	22,500	19.25	{ 19.44 19.428 19.26 }	10	3	7-8	9-	8½	905	4-12 in.	0
—	1904	1908	Justice										905	10-7.6 in. Q.	
—	1907	1908	Vérité										1825	28 Smaller Q.	2
—	1909	1911	Danton	18,027	22,500	19.25	{ 20.18 19.73 20.14 19.79 19.65 20.66 }	10	3	7-8	9-	12	925	4-12 in.	0
—	1909	1911	Mirabeau										925	12-9.4 in.	
—	1909	1911	Diderot										2010	16-3 in. Q.	2
—	1909	1911	Condorcet											8 Smaller Q.	
—	1910	1912	Vergniaud												
—	1909	1911	Voltaire												
—	1911	1913	Jean Bart	23,095	28,000	20	{ 23.07 20.80 }	10½	3	7	9-	7½	900	12-12 in.	0
—	1911	1913	Courbet										3000	22-5.5 in. Q.	
—	1912	1914	France											8 Smaller Q.	4
—	1912	1914	Paris										900	10-13.4 in.	0
—	1913	1915	Lorraine	23,177	29,250	20	{ }	11	2½	7	10½	7	3000	22-5.5 in. Q.	
—	1913	1915	Bretagne											8 Smaller	4
—	1913	1915	Provence												
—	1914	1916	Normandie												
—	1914	1916	Languedoc	24,830	33,000	21	{ }	12½	2½	8	9-	7	1500	12-13.4 in.	0
—	1915	1916	Gascogne										3500	24-5.5 in. Q.	
—	1915	1916	Flandre											4 Smaller	4
—	1915	1916	Bearn	25,230											
—	14?	?	Tourville (1)	29,450	44,000	21	{ }	13½	—	9-	—	—		16-13.4 in.	0
—	14?	?	Duquesne (1)											24-5.5 in. Q.	
—	?	?	Lyon (1)											and smaller	8
—	?	?	Lille (1)												

(1) Construction reported to have been abandoned. Names given are uncertain.

NOTE.—A battleship of the *Bretagne* type was begun at St. Nazaire in June 1914, for the Greek Navy. The contract was, however, cancelled, before construction had been advanced very far. It is not probable that this battleship is being proceeded with for the French Navy.

FRANCE (Continued).

Old Battleships. *Requin* (1885, reconstructed 1901), 7,700 tons. H.P. 8,000 = 15 knots. Armour, 19½ in. compound belt, 8-9 in. barbettes, 3-4 in. deck. Armament, 2-10-8 in., 6-3-9 in. Q., 12 smaller. Also some other old battleships, previously disarmed, brought back into service for subsidiary war duties.

CRUISERS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes.
ARMoured CRUISERS.															
—	1895	1896	Pothuau	5,374	10,000	19	19.12	2½	3½	—	3-7	2	538 638	2-7.6 in. Q. 10-5.5 in. Q. 24 Smaller Q.	4 0
—	1899	1903	Jeanne d'Arc	11,092	28,500	23	21.8	6	2½	3	4-7½	5	1400 2100	2-7.6 in. Q. 14-5.5 in. Q. 26 Smaller Q.	0 2
—	1899	1902	Gueydon	9,367	19,600	21	{ 20.9 21.1 21.38	6½	2	3½	5-8	4	1000 1600	{ 2-7.6 in. Q. 8-6.4 in. Q. 4-3.9 in. Q. 22 Smaller Q.	0 2
—	1900	1902	Montcalm												
—	1901	1905	Dupetit-Thouars												
—	1900	1903	Dupleix	7,578	17,000	21	{ 21.35 21.1 21.27	4	2½	nil	nil	4	880 1200	{ 8-6.4 in. Q. 4-3.9 in. Q. 14 Smaller Q.	2 0
—	1901	1903	Desaix												
—	1902	1903	Kleber												
—	1900	1903	Marseillaise	9,856	20,500	21	{ 21.64 21.58 21.35 22	6½	2½	5	4-8	4½	970 1590	{ 2-7.6 in. Q. 8-6.4 in. Q. 6-3.9 in. Q. 22 Smaller Q.	3 2
—	1900	1904	Gloire												
—	1902	1904	Aubg												
—	1902	1904	Condé												
—	1903	1906	Jules Ferry	12,351	27,500	22	{ 22.663 22.86	6½	2½	3-5	8	5½	1320 2100	{ 4-7.6 in. Q. 16-6.4 in. Q. 24 Smaller Q.	0 2
—	1904	1906	Victor Hugo												
—	1905	1908	Jules Michelet	12,370	29,000	23	23.2	6½	2½	3-5	8	5½	1400 2300	{ 4-7.6 in. Q. 12-6.4 in. Q. 26 Smaller Q.	0 2
—	1906	1909	Ernest Renan	13,427	30,000	23.5	25.5								
—	1907	1910	Edgard Quinet	13,780	36,000	23.5	{ 23.92 23.64	6½	2½	3-5	8	5½	1240 2300	{ 14-7.6 in. Q. 26 Smaller Q.	0 2
—	1908	1911	Waldeck Rousseau												
NOTE.—The old armoured cruiser <i>Dupuy-de-Lome</i> was reported to have been sold to Peru some years ago. Since then, it has been stated that the sale was never completed and that the <i>Dupuy-de-Lome</i> is still a French unit. For her details see the <i>Commandante Elias Aquirre</i> in Peruvian Table.															
PROTECTED CRUISERS.															
—	1896	1898	D'Entrecasteaux	7,995	13,500	19.5	19.2	—	—	—	—	—	650 1000 1460	2-9.4 in. 12-5.5 in. Q. 16 Smaller Q.	4 2 2
—	1897	1902	Guichen	8,161	24,000	23	23.55	—	—	—	—	—	2000	2-6.4 in. Q. 6-5.5 in. Q. 15 Smaller Q.	2 2 2

FRANCE (Continued).

LIGHT CRUISERS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Coal Capacity.	Armament.	
									Guns.	Tubes.
—	1888	1890	Cosmao	1,923	6,300	20.5	20.5	250	4-5.5 in. Q.	5
								330	14 Smaller Q.	—
—	1888	1890	Surcouf	2,012	6,000	20	20.5	200	4-5.5 in. Q.	4
								325	11 Smaller Q.	0
—	1889	1893	Alger	4,313	8,000	19	19.61	940	4-6.4 in. Q.	4
									6-5.5 in. Q.	0
—	1893	1894	Friant	3,882	9,500	19	18.1	587	20 Smaller Q.	0
									6-6.4 in. Q.	2
									4-3.9 in. Q.	0
—	1897	1899	Lavoisier	2,285	7,000	20	21.5	200	15 Smaller Q.	0
									4-5.5 in. Q.	2
—	1894	1896	Bruix	4,735	8,300	18.5	19	380	2-3.9 in. Q.	0
—	1892	1893	Latouche-Tréville	4,681				400	8 Smaller Q.	0
									2-7.6 in. Q.	4
								600	6-5.5 in. Q.	0
—	1895	1897	Du-Chayla	3,890	9,500	19	20.2	624	10 Smaller Q.	0
									6-6.4 in. Q.	2
									4-3.9 in. Q.	0
—	1897	1900	D'Estrées	2,421	8,500	21	20.5	345	15 Smaller Q.	0
									2-5.5 in. Q.	3
								480	4-3.9 in. Q.	0
—	1899	1901	Jurien de la Gravière	5,595	17,000	23	21.7	600	8 Smaller Q.	0
									8-6.4 in. Q.	2
								900	10 Smaller Q.	0
—	1915	1916	No. 1	4,500	32,000 (T)	{ 28-30 }	{ }	Oil only	6 or 8-5.5 in. Q. and Smaller	—
—	1915	1916	No. 2							
—	1916	1916	No. 3							
—	?		No. 4							
—	?		No. 5							
—	?		No. 6							

(1) These new light cruisers are officially classified as "Conducteurs d'escadrilles" or "Flotilla Leaders." They are really light armoured cruisers comparable to the British *Arctura* type.

DESTROYERS.

- *Arbalète* (31.37), *Arc* (28.39), *Arquebuse* (30.75), *Bélier* (29.93), *Bombarde* (30.45), *Carabine* (29.9), *Catapulte* (28.94), *Darde* (29.4), *Durandal* (27.42), *Epée* (26.19), *Epieu* (31.21), *Escopette* (26), *Fauconneau* (27.1), *Francisque* (30.02), *Fronde* (30.71), *Hallebarde* (27.42), *Harpon* (30.7), *Javelin* (29.3), *Mousqueton* (28.78), *Pertuisane* (26), *Pique* (25.58), *Pistolet* (28.95), *Rapière* (26.09), *Sabre* (28.72), *Sagaie* (30.48), *Sarbacane* (29.32), *Yaïagan* (27.07). Launched, 1899-1904. Displacement, 276-306 tons. Designed I.H.P. 5,300-6,300. Designed speed, 28 knots. Armament, 1-9 pr. Q., 6-3 pr. Q., and 2 15 in. torpedo tubes. Coal capacity, 65-75 tons.
- *Carquois* (32.5), *Claymore* (30.6), *Cognée*, *Coutelas*, *Etendard*, *Fanfare* (28.9), *Fanon*, *Fleuret*, *Gabion* (29.76), *Glaive*, *Mortier*, *Obusier* (28.3), *Oriflamme* (29.5), *Pierrier*, *Poignard*, *Sabretache* (29.6), *Sape* (29.8), *Stilet*, *Tromblon*, *Trident* (30). Launched, 1905-08. Displacement, 322-330 tons. Designed I.H.P. 5,800-6,300. Designed speed, 28 knots. Armament as *Arbalète*. Coal capacity, 75-84 tons.

* The present existence of the destroyer *Sagaie* is uncertain. She was reported to have foundered off Cherbourg in March 1914 from an unknown cause.

FRANCE (Continued).

DESTROYERS (Continued).

Aspirant-Herbert (28'5), *Carabinier* (27'45), *Cavalier* (31'1), *Chasseur* (30'4), *Ensigne-Henry* (28'3), *Fantassin* (30'4), *Hussard* (30'4), *Janissaire*, *Lansquenai*, *Mameluke* (30'6), *Spahi* (28'7), *Tirailleur* (28'82), *Voltigeur* (31'3). Launched, 1908-11. Displacement, 403-454 tons. Designed I.H.P. 6,800-7,600. Designed speed, 28 knots. Armament, 6-9 pr. Q. and 3-18 in. torpedo tubes. Coal capacity, 120-150 tons.

Bisson (31'98), *Bouclier* (35'339), *Boutefeu*, *Capitaine Mehl*, *Commandant Bory* (32'4), *Commandant Lucas*, *Commandant Rivière* (31'627), *Casque* (35'6), *Cimeterre* (32'75), *Dehorter*, *Faulx* (32'1), *Fourche* (33'8), *Francis Garnier*, *Magon*, *Mangini*, *Prolet*, *Renaudin* (32'27), *Enseigne Roux*, *Mécanicien-Principal Lestin*, *Enseigne Gabolde*. 1911-13. Displacement, 703-895 tons. Designed I.H.P. (T), 13,500 to 20,000 = 31 knots (Turbines). Armament, 2-3-9 in. Q., 4-9 pr. Q., and 4-18 in. torpedo tubes. *E. Gabolde* only, 6 tubes.

Aventurier, *Intrépide*, *Opiniâtre*, *Téméraire*. Launched, 1911. Displacement, 1,170 tons. Designed H.P. 18,000 = 32 knots (Turbines). Designed armament, 4-4 in. Q., 4-21 in. torpedo tubes. (Originally were the Argentine destroyers *Mendoza*, *Rioja*, *Salla*, and *San Juan*. Purchased for the French Navy on outbreak of war.)

Six destroyers, laid down at Havre for Turkish Navy about April 1914. Displacement, 1,040 tons. Designed H.P. 32,000 = 32 knots (Turbines). Oil fuel, 200 tons. Armament, 5-4 in. Q., 6 torpedo tubes. Other destroyers, over 1,000 tons displacement, building.

TORPEDO-BOATS.

Torpilleurs de haute mer. *Audacieux*, *Borée* (29'5), *Bourrasque* (31'41), *Cyclone* (30'38), *Mistral* (28'1), *Rafale* (31'47), *Simoun* (27'7), *Sirocco* (28'34), *Tramontane* (28'6), *Trombe*, *Typhon* (28'21). Launched, 1898-1901. Displacement, 152-182 tons. Designed I.H.P. 4,200-4,400 = 28-30 knots. Armament, 2-3 pr. Q. and 3 torpedo tubes. Coal capacity, 18-23 tons.

Forban. Launched, 1895. Displacement, 135 tons. Trial I.H.P. 3,200 = 31-2 knots. Armament, 2-1 pr. Q. and 1 torpedo tube. Coal capacity, 16 tons.

Aigillon (26'17), *Chevalier* (27'2), *Filibustier* (25'67). Launched, 1893-95. Displacement, 127-134 tons. Trial I.H.P. 1,700-2,400. Speeds as above. Armament, 2-3 pr. Q. and 2 torpedo tubes. *Chevalier* 2-1 pr. Q. Coal capacity, 15-17 tons.

Nos. 212-214, 217-218, 221, 222, 224-226, 228-233, 235, 236, 238-241, 244-249, 251-253. Launched, 1898-1903. Displacement, 84-94 tons. Designed I.H.P. 1,500-1,800. Speeds, 23-26 knots. Armament, 2-1 pr. Q. and 2 torpedo tubes. Coal capacity, 10 tons. No. 243 is fitted with Rateau turbines.

Nos. 256, 258-260, 264-270, 273-276, 278-283, 288-292, 295-369. Launched, 1902-08. Displacement, 90-97 tons. Designed I.H.P. 2,000 = 26 knots. Armament, 2-1 pr. Q. and 2 or 3 torpedo tubes. Coal capacity, 10 tons.

Old Torpilleurs de haute mer. *Grenadier* (25'25), *Grondeur* (24), *Kabyle* (21'6). Launched, 1891-02. Displacement, 128-130 tons. I.H.P. 1,100-1,550. Speeds on trial as above. Armament, 2 to 3-3 pr. Q. and 2 torpedo tubes. Coal, 15-20 tons.

Nos. 158, 170, 171, 183, 184, 187, 188, 193, 196, 197, 200, 202, 206-210. Launched, 1880-94. Displacement, circa 84 tons. I.H.P. 1,000, 1,450 = 21-24 knots speed. Armament, 2-1 pr. Q. and 2 torpedo tubes. Coal capacity, 10 tons.

FRANCE (Continued).

SUBMARINES.

- *Espadon, Silure, Sirène, Triton*. Launched, 1901. Displacement, 104-202. I.H.P. 217. Speed, 8-12. Armament, 4 torpedo tubes.
 - *Follet*. Launched, 1901. Displacement, 182 tons. I.H.P. 700=8-12½ knots. Armament, 4 torpedo tubes.
 - *Alose, Anguille, Bonite, Castor, Dorade, Esturgeon, Grondin, Loutre, Ludion, Lynx, Méduse, Naiade, Otarie, Oursin, Perle, Phoque, Protée, Souffleur, Thon, Truite*. Launched, 1903-05. Displacement, 67 tons. I.H.P. 67=8 knots. Armament, 2 torpedo tubes.
- All above practically of little or no military value. Some have been removed from service and others used only for harbour and training duties.
- *Aigrette* (8-72), *Cigogne*. Launched, 1904. Displacement, 160-250 tons. I.H.P. 200=10-5 knots. Armament, 4 torpedo tubes.
 - *Argonaute*. Launched, 1905. Displacement, 295-394 tons. I.H.P. 330=11 knots. Armament, 4 torpedo tubes.
 - *Emeraude, Opale* (11-6), *Rubis, Topaze*. Launched, 1906-08. Displacement, 383-443 tons. I.H.P. 600=8-12 knots. Armament, 6 torpedo tubes.
 - *Circe*. Launched, 1907. Displacement, 344-490 tons. I.H.P. 440=11 knots. Armament, 6 torpedo tubes.
 - *Pluviôse* (12-3), *Ventose, Floréal, Prairial, Messidor* (12-2), *Thermidor* (13-83), *Fructidor, Brumaire, Frimaire, Nivose, Papin, Berthelot, Ampère, Gay Lussac, Germinal* (12-5), *Foucault, Euler, Franklin, Watt, Cugnot, Giffard, Faraday, Volta, Newton, Montgolfier, Bernoulli, Coulomb, Arago, Le Verrier*. Launched, 1907-12. Displacement, 390-550 tons. I.H.P. 700 to 840-434 = 12 knots on surface. Submerged speed, 7-8 knots, with about 400-434 H.P. Armament, 6 or 7 torpedo tubes.
 - *Archimède* (15-8). Launched, 1909. Displacement, 570-810 tons. I.H.P. 1,700 = 15 knots. Armament, 7 torpedo tubes. Experimental boat designed by Hutter.
 - *Bourgeois*. Launched 1912. Displacement, 545-735 tons. I.H.P. 1,560 = 12-5 knots on surface. Submerged speed, 10 knots. Armament, 7 torpedo tubes. Experimental boat designed by Bordelle.
 - *Gustave Zédé* (15-5), *Nereide*. Launched, 1913. Displacement, 785-970 tons. I.H.P. 3,000 = 17 knots on surface. I.H.P. 3,000 = 12 knots submerged. Armament, 8 torpedo tubes, 4-9 pr. Q.
 - *Clorinde, Cornélie*. Launched 1913. Displacement, 410-550 tons. I.H.P. 1,300 = 15 knots on the surface. Submerged speed, 8-10 knots. Armament, 8 torpedo tubes.
 - *Amphitrite, Astée, Arihémis, Aréthuse, Atalante, Amarante, Aviane, Andromaque*. Launched, 1914. Displacement, 414-550 tons. Designed H.P. 1,300 on surface. Speeds, 15-9½ knots. Armament, 8 torpedo tubes. Caverley design.
 - *Bellone, Gorgone, Hermione*. Launched, 1914. Displacement 520-600 tons. Designed H.P. 1,800 on surface. Speeds, 17-10 knots. Armament, 8 torpedo tubes. Maugas design.
 - *Diane, Daphné*. Launched, 1914. Displacement, 630- tons. Designed H.P. 1,800. Speeds, 18½-11 knots. Armament, 4-9 pr. Q. guns and 10 torpedo tubes. Simonet design.
 - *Santé, Dupuy-de-Lôme* (Maugas design) *Joessel, Fulton, Laplace, Lagrange, Regnault* (Maurice design). Launched, 1914-1915. Displacement, 833, 1,070 tons. Designed H.P. 4,400 to 4,800 on surface, 1,700 submerged. Oil fuel and steam turbines for surface cruising. Speeds, 19-12 knots. Armament, 4-9 pr. Q. and 8 to 10 torpedo tubes.
 - *Romazotti* and others building. No details.

FRANCE (Continued).

SUBMARINES (Continued).

NOTE.—In many of the above cases there are no torpedo "tubes," the torpedoes being carried outside the hull in cradle-shaped launching apparatus. Differentiation between "submarines" and "submersibles" has purposely been avoided.

Three torpedo gunboats, the *Dunois* (1897), *La Hire* (1898), of 889 tons and 23 knots, and the *d'Iberville* (1893), of 952 tons and 21.22 knots.

Mine Sweepers: *Orient*, *Griffon*, *Lorientois*, *Damier*, *Iroise*, *Alcyon*, *Brestois*, *Echiquier*—formerly steam fishing-trawlers. Displacement, about 200 tons. Speed 9-10 knots. Also a large number of other trawlers requisitioned for war service.

SEA-GOING FLEET AUXILIARIES.

Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armament.	Notes.
1903	1904	Baliste	300	6,000	29	Some small guns	Mine-Layer
1913	1914	Baluy	600	—	13	1-3 pr. Q.	Seaplane Dépôt-Ship
1892	1893	Bouvines *	6,691	8,500	16.5	—	Submarine Dépôt-Ship
1896	1898	Cassard	3,890	9,500	19	6-6.4 in. Q., 4-3.9 in. Q., 14 Smaller	Mine-Layer
1894	1895	Cassini	958	5,000	21	1-3.9 in. Q., some Smaller	" "
1912	1912	Cerbère	566	6,000	20	1-3 in. Q.	" "
1914	1914	Charrue	250	600	13	—	" "
1898	1900	Chateaurenault	7,898	23,000	23	2-6.4 in. Q., 6-5.5 in. Q., 15 Smaller	" "
—	—	Czar Nicolai II.	—	—	—	—	Captured German Oil-Tanker
1901	1902	Flamberge	300	5,700	28	Some small guns	Mine-Layer
1895	1896	Foudre	5,984	11,500	19.5	8-3.9 in. Q., 8 Smaller	Seaplane Dépôt-Ship
1883	1886	Furieux	5,800	5,000	14	2-9.4 in. Q., 4-3.9 in. Q., 10 Smaller	Submarine Dépôt-Ship
1908	1908	Hacie	335	6,000	28	Some small guns	Mine-Layer
1914	1914	Hetse	250	600	13	—	" "
1891	1893	Isly	4,160	8,000	19	—	Destroyer Dépôt-Ship
1886	1888	Lance	400	2,000	18	8 small guns	Submarine Tender
1908	1908	Massue	335	6,000	28	Some small guns	Mine-Layer
1914	1914	Pioche	250	600	13	—	" "
1911	1912	Pluton	566	6,000	20	1-3 in. Q.	" "
1893	1894	Tréhouart *	6,671	8,500	16.5	—	Submarine Dépôt-Ship
1914	1914	Rateau	250	600	13	—	Mine-Layer
Bdg.	—	" X "	1,700	—	17	2-5.5 in. Q. 6 Smaller	Gunboat

* These two old coast-defence battleships were partly disarmed at outbreak of war, but may have been re-armed for war service.

ARMED AUXILIARIES, Etc.

A large number of liners, mercantile ships, colliers, oil-tankers, trawlers, tugs, yachts, etc., have been requisitioned for war service as armed mercantile cruisers, fleet-, flotilla-, and seaplane dépôt-ships, supply, repair, and hospital ships, transports, and for patrol and examination service, etc.

GERMANY.

CAPITAL-SHIPS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.			
								A	B	C	D	E		Guns.	Tubes		
A. 39 BATTLESHIPS—33 COMPLETE.																	
1896	1898		K. Friedrich III.	10,614	13,000	18	17.2										
1897	1900		K. Wilhelm II.														
1899	1901		K. Wilhelm der Grosse														
1899	1901		K. Karl der Grosse														
1900	1901		K. Barbarossa	11,643	14,000	18	18										
1900	1902		Wittelsbach														
1901	1902		Wettin														
1901	1902		Zähringen														
1901	1903		Schwaben														
1901	1903		Mecklenburg														
1902	1904		Braunschweig														
1903	1905		Elsass	12,997	16,000	18	18.74										
1903	1905		Hessen														
1903	1906		Preussen														
1904	1906		Lothringen														
1904	1906		Deutschland	12,997	16,000	18	18.64										
1904	1906		Deutschland														
1905	1907		Hannover														
1905	1907		Pommern†														
1906	1908		Schlesien														
1906	1908		Schleswig-Holstein														
1908	1909		Nassau														
1908	1909		Westfalen	18,600	20,000	19.5	20.7										
1908	1910		Rheinland														
1908	1910		Posen														
1909	1911		Ostfriesland														
1909	1911		Helgoland	22,440	25,000	20.5	20.4										
1909	1911		Helgoland														
1909	1911		Thüringen														
1910	1912		Oldenburg														
1911	1913		Friedrich der Grosse	24,310	28,000 (T)	21	21.23										
1911	1913		Kaiser														
1911	1913		Kaiserin														
1912	1913		König Albert														
1912	1913		P. Regent	25,350	28,000 (T)	21	21.07										
1912	1913		Luftpold														
1913	1914		Markgraf														
1913	1914		Grosser Kurfürst														
1913	1914		König	28,000	40,000	21	21.41										
1914	1915		Kronprinz														
1914	1916		E. Wörth														
1914	1916		"T"														
1915	1916		E. Kaiser Friedrich III	19,500	40,000	22	—										
1914	1915		"X," Ex-Salamis†														

* These vessels have been reconstructed, 360 tons being removed from them.

† Torpedoed, believed to be sunk.

‡ The armament given is that provided for in the original design, but probably other guns have been substituted and actual armament is doubtful.

GERMANY (Continued).

CAPITAL-SHIPS (Continued).

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes
B. BATTLE CRUISERS.															
1909	1910	Von der Tann *	19,100	43,000 (T)	25	28.12	10	2½	5-6	8	4½	1000	8-11 in.	0	
												2800	10-5.9 in. Q.	4	
1910	1911	Moltke	22,640	52,000 (T)	25.5	28.57 28.6	11	2½	5-6	8	5	1000	10-11 in.	0	
1911	1912	Goeben										3100	12-5.9 in. Q.	4	
													12-3.4 in. Q.	0	
1912	1913	Seydlitz	24,610	63,000 (T)	25.5	25.9	11	2½	5-6	8	5	1000	10-11 in.	0	
												3100	12-5.9 in. Q.	6	
													12-3.4 in. Q.	0	
1913	1914	Derfflinger	26,600	70,000 (T)	27	—	4-7	—	—	10	6	4700	12-5.9 in. Q.	0	
													12-3.4 in. Q.	4	
1913	1914	Lützow	28,000	70,000 (T)	26	—	4-7	—	—	10	6	1000	8-12 in.	0	
1915	1916	Hindenburg										4800	12-5.9 in. Q.	4	
—	—	E. Victoria Luise											12-3.4 in. Q.	4	
2 Battleships of Questionable Fighting Value.															
1	1892	1894	Würth	9,874	10,000	17	17.2 16.5	12	2½	nil	5-12	3	680	6-11 in. (old)	1
2	1891	1893	Brandenburg										800	8-4.1 in. Q.	2
														8-3.4 in. Q.	2
														.6 Smaller Q.	
ARMoured CRUISERS.															
1897	1900	Fürst Bismarck†	10,570	14,000	19	18.7	4-8	2	nil	8	4	1000	4-9.4 in.	1	
												1250	12-5.9 in. Q.	5	
													10-3.4 in. Q.		
													18 Smaller Q.		
1900	1902	Prinz Heinrich	8,759	15,000	20	20.1	2-4	2	4	4-6	4	950	2-9.4 in.	1	
												1500	10-5.9 in. Q.	3	
													10-3.4 in. Q.		
													14 Smaller Q.		
1903	1905	Roon	9,350	19,000	21	21.17 21.4	3-4	2½	4	4-6	4	750	4-8.2 in. Q.	0	
												1600	10-5.9 in. Q.	4	
													16-3.4 in. Q.	4	
													14 Smaller Q.		

* Believed sunk.

† Partly disarmed.

GERMANY (Continued).

LIGHT CRUISERS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Cool Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes
—	1887	1888	Prinzess Wilhelm	4,224	8,000	18	18.7						540	4.5 in. Q.	2
—	1887	1888	Irene				19.8						750	8.4 in. Q.	1
—	1892	1892	Conдор	1,614	2,900	16	16.5						165	15 Smaller Q.	2
—	1892	1892	Seeadler				16						300	8.4 in. Q.	0
—	1892	1896	Kaiserin Augusta	5,956	14,000	21	22.5						700	7 Smaller Q.	4
—	1892	1896	Kaiserin Augusta										810	12.5 in. Q.	1
—	1893	1894	Gefion	3,705	9,000	20	20.5						780	8.3 in. Q.	2
—	1897	1898	Freya (1)	5,569	10,000	19	19.5							10 Smaller Q.	0
—	1897	1898	Hertha				19.5						825	2.8 in. Q.	0
—	1897	1898	Victoria Luise				19.5						1000	6.5 in. Q.	3
—	1897	1899	Vineta	5,791			19							14.3 in. Q.	0
—	1898	1899	Hansa	2,603	6,400	19	19							8 Smaller Q.	3
—	1898	1898	Gazelle (2)				19.5								
—	1899	1901	Niobe	2,618	8,000	21	21.6						300	10.4 in. Q.	0
—	1899	1901	Nympe				22.3							14 Smaller Q.	2
—	1900	1901	Amazon				21.5						560		
—	1900	1901	Thetis	2,657	8,000	21	21.75								
—	1900	1901	Medusa				22						450	10.4 in. Q.	0
—	1902	1903	Arcona				21.5							14 Smaller Q.	2
—	1902	1904	Frauenlob	3,200	10,000	23	21.7						700		0
—	1903	1904	Berlin				23.2						450	10.4 in. Q.	2
—	1903	1904	Hamburg				23.28						800	2 Machine	0
—	1904	1905	München	2,618	8,000	21	23.45							12.4 in. Q.	2
—	1904	1906	Lübeck (3)				23.56								
—	1905	1907	Danzig				22.96						400	10.4 in. Q.	0
—	1906	1908	Stuttgart	3,350	13,200	23.5	23.3							2 Machine	2
—	1907	1908	Stettin (4)				25.77						850		0
—	1908	1910	Kölnberg				26.32						400	12.4 in. Q.	2
—	1909	1911	Augsburg	4,281	19,600 (T)	25.5	27.01						900	2 Machine	2
—	1911	1912	Breslau	4,478	{ 22,300 } { 25,000 } (T)	26.75	27.55	4	1		3		450	12.4 in. Q.	0
—	1911	1912	Strassburg				28.8						1200	2 Machine	2
—	1911	1912	Stralsund				28.27								0
—	1912	1913	Rostock	4,820	30,000 (T)	26.75		4	1		3		500	12.4 in. Q.	2
—	1913	1914	Graudenz										1300	2 Machine	0
—	1914	1914	Regensburg												
—	1914	1915	Ersatz Hela	5,600	—	28		6						6 or 8	2
—	1914	1915	E. Gefion											5.9 in.	
—	1914	1915	E. Niobe												
—	1915	1915	Wiesbaden	4,300	28,000	27½		3					1000	12.4 in.	
—	1914	1915	"A" (5)												
—	1914	1915	"B," (6)												

(1) These five ships have been reconstructed as training-ships, part of their armament having been removed.

(2) Gazelle has one submerged tube and two above water. This class is rapidly wearing out.

(3) Lübeck has turbine engines of 14,000 shaft horse power.

(4) Stettin has turbine engines of 18,000 shaft horse power.

(5) Originally Russian *Amurski*.

(6) Originally Russian *Nevelskoi*.

NOTE.—Cruisers from Breslau downwards are "light armoured" type, with thin waterline belt armour.

GERMANY (Continued).

GUNBOATS.

Panther (1901) and *Eber* (1903) of 977 tons, 13.5 knots, and 2.4'1 in. Q. New boat, ex-"C." Launched, 1914. Displacement, 1,150 tons. 14 knots. Four 4.1-in. and 4.3.4 in. River gunboats, *Otter* (1909) and *Vorwärts* (1899) of about 200 tons.

DESTROYERS.

- (36) S91 to S107, G108 to G113, and S114 to S131. Launched, 1899-1905. Displacement, 350-413 tons. Designed I.H.P. 5,400-6,200. Designed speed, 27.5-29 knots. Armament, 3-4 pr. Q., 2 machine guns, and 3 torpedo tubes. Coal capacity, 100 tons. Most of the boats have exceeded their designed speed on trial, several touching 30 knots. Their armament is notoriously weak; in this respect they are little better than torpedo-boats. S125 is turbine propelled and has a higher horse-power; nevertheless, her speed did not reach 29 knots. She displaces 446 tons. Programmes of 1898-1904 at the rate of six units a year.
- (5) G132-G136. Launched, 1906. Displacement, 480 tons. Designed I.H.P. 6,000-6,500 = 28 knots. Armament (except G135), 4-4 pr. Q., 2 machine guns, and 3 torpedo tubes. G135 carries 1-15 pr. Q., 2-4 pr. Q., 2 machine guns, and 3 torpedo tubes. Coal capacity, 135 tons. 1905 Programme.
- (1) G137. Launched, 1907. Displacement, 560 tons. Estimated I.H.P. with turbines, 10,000 = 30 knots. Armament, 1-23 pr. Q., 3-4 pr. Q., 2 machine guns, and 3 torpedo tubes. Maintained a mean speed of 33.9 knots on trial, August, 1907. 1905 Programme.
- (12) S138-S140. Launched, 1906-07. Displacement, 530 tons. Estimated I.H.P. 10,000 = 30 knots. Armament, 1-23 pr. Q., 3-4 pr. Q., 2 machine guns, and 3 torpedo tubes. Coal capacity, 170 tons. 1906 Programme.
- (12) V150-V161. Launched, 1907-08. Displacement, 670 tons. I.H.P. 10,250 = 30 knots. Armament, 2-23 pr. Q., 2 machine guns, and 3 torpedo tubes. Coal capacity, 175 tons. V161 alone of this series has turbine engines. 1907 Programme.
- (12) V162-V164, S165-S168, G169-G173. Launched, 1908-09. Displacement, 607 tons. I.H.P. (T) 12,000 = 30 knots. Armament, 2-23 pr. Q., 2 machine guns, and 3 18 in. torpedo tubes. Coal capacity, 160 tons. G171 attained 34.72 knots. 1908 Programme. G171 sunk.
- (11) G174-G175, S176, S177, S179, V180-V185. Launched, 1909-10. Displacement, 626 tons. I.H.P. (T) 16,000 = 32.5 knots. Armament, 2-23 pr. Q., 2 machine guns, and 4 18 in. torpedo tubes. Coal capacity, 180 tons. 1909 Programme. S178 sunk in collision, March 4, 1913.
- (11) V186-V191, G192-G197. Launched, 1910-11. Displacement, 640 tons. I.H.P. (T) 16,000 = 32.5 knots. Armament, 2-23 pr. Q., 2 machine, and 4-19.5 in. torpedo tubes. Coal capacity, 190 tons. 1910 Programme.
- (12) V1-V6, G7-G12. Launched, 1911-12. Displacement, 570 tons. I.H.P. 15,000 (T) = 32.5 knots. Armament, 2-23 pr. Q., 2 machine, and four 19.5 in. torpedo tubes. Coal capacity, 160 tons. 1911 Programme.
- (12) S13-S24. Launched, 1912. Displacement 564 tons. I.H.P. 15,000 = 32 knots. Armament, 2-23 pr. Q., 4 machine, and four 19.5 in. torpedo tubes. Coal capacity, 146 tons. 1912 Programme.
- (12) V25-S36. Launched, 1913. Details as for preceding class. 1913 Programme.
- (12) G37-V48. Launched, 1914-15. Details unknown. 1914 Programme.
- (6) Boats. Launched, 1914-15 (at Stettin for China, probably seized by Germany). Displacement, 1,000 tons. 32 knots. Armament 2.4'1 in. or 3'4 in., 4 smaller and two torpedo tubes.

GERMANY (Continued).

DESTROYERS (Continued)

- (4) Boats building for Argentine Govt. in German yards and appropriated on outbreak of war. Launched, 1914-15. Displacement, 1,200 tons. 32 knots (turbines and Diesel motors = 30,000 H.P.). Original armament, 3-4 in. guns, 4 tubes. Originally named: San Luis, Sante Fé, Santiago, Tucuman.
- (4) Boats. Launched, 1914-15 (at Stettin for Holland, and seized by Germany). Displacement, 322 tons. 27 knots. Other details unknown.

At least six of the above boats, and probably many more, have been sunk, but as the German authorities, when admitting a loss, often fail to specify the boat, it is impossible to say exactly which destroyers have gone. See list of enemy war losses.

TORPEDO-BOATS.

- 14 T74-T87. Launched, 1894-98. Displacement, 125-155 tons. Designed I.H.P. 1,800-2,300 = 25-26 knots. Armament, 1-2 pr. Q., and 3 or 4 torpedo tubes. Coal capacity, 32-53 tons.
- 2 G88-G89. Launched, 1898. Displacement, 155 tons. Designed I.H.P. 2,800 = 26 knots. Armament, 1-4 pr. Q., 2 machine guns, and 3 torpedo tubes. Coal capacity, 37 tons.
- 8 D3-D10. Launched, 1888-90. D9 launched 1894. D10 launched 1898. Displacement, 230-380 tons. Designed I.H.P. 2,000-5,500. Trial speeds, 20-27.5 knots. Armament, 4-6 pr. Q. (D10 has 5), 2-1 pr. Q., and 3 torpedo tubes. Coal capacity, 90 tons. These boats, sometimes included with the destroyers, have little war value.
- 8 T66-T73. Launched, 1890-93. Displacement, 100-145 tons. Designed I.H.P. 1,600-1,800. Trial speeds, 21-23 knots. Armament, 1-4 pr. Q. and 3 torpedo tubes.
- 22 In addition to the above there are twenty-two old first-class torpedo-boats, T42-T47, T49-T57, T59-T65, launched at Elbing between the years 1887 and 1889. Displacement, 130-153 tons. Designed I.H.P. 1,250-1,800. Speeds, when new, 20-22 knots. Armament, 1-4 pr. Q. and 2 or 3 torpedo tubes. Coal capacity, 17-40 tons. Few of these have any present war value.

SUBMARINES.

- U1 and U2. Launched, 1906-8. Displacement 197-236 tons. I.H.P. 110-450. Speed, 8-10 knots. Armament, 2 torpedo tubes. Three torpedoes carried. These boats are probably ineffective by now.
- U3-U7. Launched, 1908-11. Displacement, 350-400 tons. I.H.P. 1,000. Speed, 8-12 knots. Armament, 4 torpedo tubes and 1 gun.
- U9, 10, 11, 13, 16, 17, 19, and 20. Launched 1910-12. Displacement, 500-700 tons. Speed on surface about 16 knots. Armament 4-6 torpedo tubes and 2 guns.
- U21-26, U28, U31-36. Launched, 1912-14. Displacement, 800-950 tons. Speed on surface about 17 knots, submerged 12 knots. Armament 6 tubes and 2 guns.
- 1 Boat, ex-Norwegian A 5, taken over on outbreak of war. Launched, 1914. Displacement, 250-350 tons. Speeds, 14 and 10 knots. Armament, 3 tubes.
 - 2 Other boats complete and building. Several other submarines were reported to be building in Germany for neutral Powers on outbreak of war, but no details are available.

NOTE.—15 German submarines have been definitely reported lost by gunfire, ram, or mine, but seven of these cannot be identified. Many other boats are also believed to have been sunk or captured, but details are lacking.

GERMANY (Continued).

SUBMARINES (Continued).

TABLE AND NOTES ON GERMAN SUBMARINES, WITH REMARKS ON GERMAN SUBMARINE ENGINES.

Specially contributed to THE NAVY LEAGUE ANNUAL by Mr. A. P. Chalkley, the Editor of "The Motor Ship and Motor Boat."

Owing to inadequacy of information, unknown war losses, and intentional "faking" of the index-marks on German submarines, it is practically impossible to classify these boats by the number in each type.

Mr. Chalkley, the Editor of *The Motor Ship and Motor Boat*, has kindly contributed the following information on the subject, based on an exceptional knowledge of submarine construction. Mr. Chalkley several times visited Germany before the war, and has been conducted over the submarine-engine shops of the Krupp and M.A.N. firms. The tables he has prepared show the *general* designs the German submarines were built to. Types "A" and "B" represent the earlier designs, while Types "C" and "D" enumerate the features of the largest ocean-going enemy submarines. U35 and U38 come within these last two categories, *i.e.* "C" and "D."

Mr. Chalkley says that there are more types than are suggested by this brief outline, as the enemy has been using both submarines and large submersibles. The distinction between these two types cannot be gone into here, but those desirous of investigating the point may refer to the article contributed by M. Maxime Laubeuf, the eminent French submarine designer, to the 1909-10 Edition of THE NAVY LEAGUE ANNUAL.

The displacements given in the following table must be regarded (with the other figures) as *approximate* only. The radii of action can be increased enormously above the figures given if necessity arises.

The German submarine U1 is excluded from the Tables as non-effective. No attempt has been made to indicate the number of submarines now possessed by Germany.

Details.	Type "A."	Type "B."	Type "C."	Type "D."
Date	1906-9	1909-11	1911-15	1915
<i>Dimensions (ft.):</i>				
Length	120-130	140	200-215	225 (?)
Beam	12	14 ft. 6 in.	21	21 (?)
Draught	9 ft. 3 in.	—	—	—
Displacement				
above water	200 & 250	450	700 & 800	—
below	250 & 300	550	850 & 900	1000
<i>Engines:</i>				
H.P.:				
above water	600	1200	2600 & 1800	4000 (?)
below	300	500	700 & 700	900
Speed				
above water	13	14	17.5 & 15.5	20
below	8	8.5	9 & 9	9
Radii of action				
above water	1300	1500	3000-4000	3000-4000
below	40	60	80	80
<i>Armament:</i>				
Torpedo tubes:				
Number	Two	Three	Four	Six
Size	18 in.	18 in.	19.7 in.	21.6 in.
Guns:				
Number	Two	One	Two	Two
Calibre	1-pr.	3 in. 12-pr.	3.4 in. 21-pr.	3.4 in. 21 pr.
Complement	12	18	30	32

GERMANY (Continued).

SUBMARINES (Continued).

NOTES ON PRECEDING TABLE.

It is not probable that many of the Type "B" were built, as, soon after this design was evolved, the 900 H.P. Diesel engine became a practical proposition, and the German Admiralty apparently immediately went over to the large type of submarine. Certainly 900 H.P. submarine engines were built and ran trials early in 1911.

Type "C" should evidently be divided up into two classes, as there are boats in this category some of which are pure submarines and others submersibles.

NOTES ON ENGINES OF GERMAN SUBMARINES.

Most of the engines in Type "A" are paraffin motors, probably the majority of them being built by Körting. Diesel engines are fitted in all the other types, "B," "C," and "D," some being constructed by Krupps at Kiel and some by the M.A.N. firm. The M.A.N. engines are of two species, (a) the two-cycle type built at the Nuremberg shops and (b) the four-cycle type at the Augsburg works of the M.A.N. firm.

There is little doubt that the largest number of boats have been engined with two 900-950 H.P. motors of the Krupp and M.A.N. types. It is uncertain how many of the submarines have been put into commission in which two 1,300 H.P. motors are installed, but the construction of this type of engine was well under way at the outbreak of war. The submarine ordered from the F.I.A.T. Co. had this power, but presumably she was never delivered.

As regards the Type "D," the design for the 2,000 H.P. engine was commenced about 1912, and it is understood that experimental engines were being built early in 1914. It is possible, therefore, that some of these motors have been put into service, that is, two 2,000 H.P. engines have been installed in the latest submarines with an aggregate H.P. of 4,000 units. Whether success has been achieved with the 2,000 H.P. engine remains at present in doubt.

SEA-GOING FLEET AUXILIARIES.

Year of Launch.	Year of Completion.	Name.	Displacement in tons.	Designed I.H.P.	Designed Speed.	Armament.	Notes.
1906	1906	Delphin	445	450	9.5	4-3.4 in. Q.	Gunnery Tender
1908	1909	Drache	920	1,600	15	8-4.1 in. Q.	" "
1905	1905	Fuchs	640	1,100	12.5	2-4.1 in. Q., 2-3.4 in. Q., 2 Smaller	" "
1907	1907	Hay	640	1,100	12.5	8-4 pr. Q.	" "
1906	1907	Nautilus	1,970	6,000	20.8	8-3.4 in. Q., 4 Machine	Mine-Layer
1890	1891	Pelikan	2,360	3,000	15.5	4-3.4 in. Q., 4 Machine	Mine Transport
1907	1908	Vulkan	—	—	12	—	Submarine Salvage Ship
1914	1915	"X"	2,800	—	9	—	" "
1892	1893	Hohenzollern	4,250	9,500	21	3-4.1 in. Q., 12-4 pr. Q., 6 machine	Imperial Yacht
1914	—	Ersatz Hohenzollern	7,300	—	18	?	New Imperial Yacht

ARMED AUXILIARIES, ETC.

A large number of steamers, trawlers, yachts, etc., have been requisitioned for war service as armed merchant cruisers, mine-layers, seaplane-ships, submarine tenders, supply and hospital-ships, etc. Others are used on patrol and examination service in the Baltic. A Motor Boat Volunteer Reserve has also been formed for coastal, river, and canal work on the Vistula and Scheldt rivers and Belgian canals. About 500 motor craft are in service, including three or four specially built, motor-engined, shallow-draught gunboats.

GREECE.

5 BATTLESHIPS—5 COMPLETE.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armour Inches.					Coal Capacity.	Armament.	
							A	B	C	D	E		Guns.	Tubes.
1	1889	1891	Hydra (1)	4,808	7,000	17	11½	2½	3	13½	—	800	3-10·6 in. Canet B.	3
2	1889	1891	Spetzai (1)										5-5·9 in. Q.	—
3	1890	1892	Psara (1)										1-3·9 in. Q. 24 Smaller Q.	0
4	1905	1908	Lemnos (2)	13,000	10,000	17	7-9	3	7	7½	6-12	750 1750	4-12 in. 8-8 in. 12-7 in. Q.	0
5	1905	1908	Kilkis (2)										20-3 in. Q. 30 Smaller	3

(1) These three vessels were reconstructed in 1897-1900.

(2) Ex-U.S. battleships *Idaho* and *Mississippi*. Purchased in 1914. Full load displacement, 14,470 tons.

1 ARMOURED CRUISER.

1	1910	1911	Giorgio Averoff	9,956	20,000 (T)	24	8	½	7	7	6	700 1600	4-9·2 in. B. 8-7·5 in. Q. 16-3 in. Q. 8 Smaller Q.	0 3
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3 LIGHT CRUISERS.

1	1912	1914	Helli (1)	2,650	8,000 (T)	22½	—	1½	—	—	—	400 600	2-6 in. Q. 4-4 in. Q. 10 Smaller	2 0
2	1914	1915	Admiral Condouriotis	5,500	25,000 (T)	25·5	3	2	—	—	—	650 1000	8-6 in. Q. 4-3 pr. Q. and Smaller	0 2
3	1914	1915	Lambros Katsonis											

(1) Ex-Chinese Cruiser *Fei-Hung*, purchased 1914.

1 Corvette.—*Sfaktirea* (1885), 1,000 tons. I.H.P. 2,400=14·5 knots. Armament, 2-3·9 in., 2 machine. Coal capacity, 100 tons.

5 Gunboats.—*Acheloos*, *Alphios*, *Eurotas* (1884), 420 tons. I.H.P. 400=10 knots. Armament, 2-3·7 in. and 3 machine. Coal, 50 tons.
Ambraeia, *Aktion* (1885), 440 tons. I.H.P. 380=10 knots. Armament, 1-10·2 in. Krupp and 2 machine.

1 Torpedo Depot Ship.—*Kanaris* (1877), 1,100 tons. I.H.P. 500=14 knots. Armament, 2-3·9 in. Krupp and a few machine. There are also sundry smaller gunboats of no value.

18 Destroyers.—*Aspis*, *Velos*, *Naphkratoussa* (32·012), *Thyella* (31·79), *Nike*, *Doxa*, *Lonhi* (32·535), *Sfendoni* (31·847). Launched, 1906-07. Displacement, 350 tons. I.H.P. 6,000=31 knots. Armament, 2-3 in. Q., 4-6 pr. Q., and 2 tubes. Coal, 80 tons.

Aetos, *Jerex*, *Leon*, *Pardalos*. Purchased from the Argentine Government, October 1912. Launched, 1911. Displacement, 980 tons. Designed I.H.P. 19,750=32 knots. Armament, 4-4 in. Q., 3-9 pr. Q., and 4-21 in. torpedo tubes.

Keravnos, *Neogenea*. Launched, 1912. Displacement, 640 tons. I.H.P. 23,500=32·5 knots. Armament, 2-23 pr. Q., 2 machine and four 19·5 in. tubes. Coal capacity, 200 tons. Purchased from the Vulkan Yard, Stettin, 1912.

Samos, *Lesbos*, *Crete*, *Chios*. Launched, 1914-15. Displacement (about) 1,200 tons. Designed I.H.P. = 35 (?) knots. Armament, 7-4 in. Q., — torpedo tubes.

14 Torpedo Boats.—*Alcyon*, *Arethusa*, *Aigli*, *Dafni*, *Doris*, *Thetis*. Launched, 1912-13. Displacement 125 tons. Designed H.P. = 25 knots. Armament, 2-6 pr. Q., three torpedo tubes.

Nikopolis, *Tokat*. Captured in Turkish war. Launched, 1906. Displacement 160 tons. Designed H.P. 2,400=26 knots. Armament, 2-3 pr. Q., two torpedo tubes. Also 6 other torpedo boats of little or no value.

4 Submarines.—*Delphin*, *Xiphias*. Built at Creusot Works, France. Launched, 1911-12. Displacement, 300 tons on the surface, 460 tons submerged, Speeds, surface 14 knots, submerged 9 knots. Armament, five torpedo tubes. Two more building in France.

HOLLAND.

7 COAST DEFENCE BATTLESHIPS—7 COMPLETE.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armour Inches.					Coal Capacity.	Armament.	
							A	B	C	D	E		Guns.	Tubes.
1	1894	1896	Kortenaer	3,464	4,800	16	5-9	2-3	—	9-4	—	250	3-8-2 in. B. 2-5-9 in. B. 6-3 in. Q. 6 Smaller Q.	2
2	1900	1902	Koningin Regentes	5,014	6,000	16	4-6	2	—	3-10	3	680	2-9-4 in. B. 4-5-9 in. Q. 8-3 in. Q. 6 Smaller Q.	3
3	1901	1903	De Ruijter											
4	1902	1903	Hertog Hendrik											
5	1904	1906	Martin Tromp	5,211	6,000	16	4-6	2	—	8-10	3	680	2-9-4 in. B. 4-5-9 in. Q. 8-3 in. Q. 6 Smaller Q.	3
6	1906	1908	J. van Heemskerck											
7	1909	1910	Zeven Provinciën	6,525	8,500	16	4-6	2	—	8-10	3	1000	2-11 in. B. 4-5-9 in. Q. 10-3 in. Q. 4 Smaller Q.	nil

- 2 Light Cruisers building. Displacement, 7,100 tons. Designed H.P. = 30 knots (Turbines). Armament, 10-6 in. Q. and smaller. ? torpedo tubes.
- 4 Old Light Cruisers.—*Holland, Zeeland* (1896), 3,847 tons, *Gelderland, Noord Brabant* (1898-99), 3,969 tons. I.H.P. 10,500 = 20 knots. Armament, 2-5-9 in. Q., 6-4-7 in. Q., 4-3 in. Q., and 12 smaller Q. Torpedo tubes, 4. Coal capacity, 850 tons.
- 3 Armoured Gunboats. *Brimio, Friso, Gruno*. Launched, 1912. Displacement, 530 tons. I.H.P. (Oil Engines) 1,200 = 16 knots. Armament, 4-4-1 in. Q., 2 machine. Belt, 2 in. steel.
- 61 Gunboats.—Holland possesses a large fleet of gunboats for the protection of her East Indian Colonies, many of them quite modern. They range from the *Assahan*, of 830 tons, to small launches. In all there are forty-three vessels. In home waters are a further twenty-two of mediocre value.
- 8 Destroyers.—*Fret, Wolf* (30-08), *Bulhond, Jakkal*. Launched, 1910-11 and *Lynx, Vos, Hermelyn, Panter*. Launched, 1912-13. Displacement, 415 tons. I.H.P. 7,500 = 30 knots. Armament, 4-12 pr. Q., 4 machine guns, and two torpedo tubes. Coal capacity, 95 tons.
- 8 Submarines.—No. 1. Launched, 1905. Holland type. Displacement, 120 tons. Speeds, 7-2 knots and 8-9 knots. Armament, one torpedo tube. No. 2—No. 5. Launched, 1911-13. Displacement, 130-145 tons. Speed, 17-8 knots. Armament, 2-18 in. torpedo tubes. No. 5 and No. 6 building. Displacement 220 tons. K1-K3 (for the East Indies). Launched, 1912-15. Displacement, 320-390 tons. Speeds, 16-11 knots. Armament, three 18 in. torpedo tubes.
- 1 Submarine Depot-ship.—*Cornelius Drebbel*, building.
- 4 Mine-Layers.—*Medusa, Hydra*. Launched, 1911. Displacement, 670 tons. I.H.P. 800 = 11 knots. Armament, 3-3 in. Q. *Balder, Hadda* (1878-9) ex-gunboats. Displacement, 268 tons. I.H.P. 170 = 8 knots. Armament, 2 small Q.
- 47 Torpedo boats.—Z1-Z8 Building. Displacement, 310-322 tons. Designed H.P. 5,500 = 27 knots (Turbines). Armament, 2-12 pr. Q., 3 or 4 torpedo tubes. (First four are to replace original Z1-Z4 built by Vulkan, Stettin, and purchased by Germany on outbreak of war.) G13-G16 Launched, 1914-15. Displacement, 180 tons. I.H.P. = 25 knots. Armament, 2-3 in. Q. and three torpedo tubes. *Ophir, Pangraro, Rindjani, Smeroe, Tangka, Wajang, Johan-van-Brakel, Van-Danelszoon-van-der-Rijn, Meijnderl-Jentjes, Willem-Willemsje, Roemer-Blacq, Pieter-Constant, Jacob-Cleijndijk, Cornelis-Janssen-de-Haan, G9 to G12*. Launched, 1901-08. Displacement, 140-143 tons. Speed, 24-5 to 26 knots. Armament, 2-6 pounder and three 18 in. torpedo tubes. Complement, 25.
- Hydra, Scylla, Minotaurus, Pythorn, Sphinx, Draak, Krokodil, Zee slang*. Launched, 1900-07. Displacement, 100 tons. Speed, 25 knots. Armament, 2-3 pounder and two or three 18 in. torpedo tubes. Complement, 20. These eight boats are in the Dutch East Indies.
- Ardjoeno, Empong, Idjen, Cerberus*. Launched 1886-89. Displacement, 80 tons. Speed, 18-22 knots. Armament, 2-3 pounder and two 18 in. torpedo tubes. Complement, 16. *Cerberus* is in the Indies and carries three tubes and 20 men.

ITALY.

BATTLESHIPS

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes
—	1901	1904	Regina Margherita	13,214	19,000	20	20.2	6	3	6	8-10	6	1000	4-12 in. 4-8 in. Q.	0
—	1904	1907	Regina Elena	12,425	20,000	22	22.5 22.8 23.6 23	10	4	8	6-8	3½ 6	2000	12-6 in. Q. 16-3 in. Q. 12 Smaller Q.	4
—	1904	1908	Vittorio Emanuele										1000	2-12 in. 12-8 in. Q.	0
—	1905	1908	Napoli										2000	24-3 in. Q. 4 Smaller Q.	2
—	1907	1909	Roma										1000	12-12 in. 20-4.7 in. Q. 16-3 in. Q.	0
—	1910	1913	Dante Alighieri	19,400	26,000 (T)	22	24.5	10	2½	8	10	3½	1000	12-12 in. 20-4.7 in. Q. 16-3 in. Q.	0
—	1911	1914	Conte di Cavour	22,340	24,000 (T)	21	{ }	10	2½	8	10	3½	2500	16-3 in. Q.	3
—	1911	1914	Leonardo-da-Vinci										1000	13-12 in. 18-4.7 in. Q.	0
—	1911	1914	Giulio Cesare	22,340	24,000 (T)	21	{ }	10	2½	8	10	3½	3000	20-3 in. Q.	3
—	1913	1915	Cale Duilio										1000	13-12 in.	0
—	1913	1915	Andrea Doria										3000	16-6 in. Q. 24-3 in. Q.	3
—	1915	—	Francesco Morosini	26,000	50,000 (T)	25	{ }	11	2½	8	10	3½	Oil only	8-15 in. Q. 16-6 in. Q. 24-14 pr. Q.	
—	—	—	Cristoforo Colombo												
—	—	—	Marc-Antonio Colonna												
—	1914	—	Ammiraglio Caracciolo												

Battleships of Minor Fighting Value.

—	1897	1901	A. di St. Bon	9,645	13,500	18	{ 18 18.3 }	9½	3	6	6-9½	6	600	4-10 in. 8-6 in. Q. 8-4.7 in. Q. 24 Smaller Q.	0
—	1897	1902	Emanuele Filiberto										1000	4-13.5 in. 8-6 in. Q. 16-4.7 in. Q. 34 Smaller Q.	4
—	1891	1895	Sicilia	13,087	19,500	20	{ 20.3 19.3 }	4½	3	4	1-14½	nil	1200	4-13.5 in. 8-6 in. Q.	3
—	1888	1893	Re Umberto	13,673									3000	16-4.7 in. Q. 34 Smaller Q.	2

(ARMoured) CRUISERS.

—	1895	1897	Vettor Pisani	6,396	13,000	19	{ 20 19.2 }	4½	1½	6	6	4½	600	12-6 in. Q. 6-4.7 in. Q. 20 Smaller Q.	0
—	1896	1898	Carlo Alberto										1000	1-10 in. Q. 2-8 in. Q. 14-6 in. Q. 10-3 in. Q. 8 Smaller Q.	4
—	1899	1900	Varese	7,294	13,500	20	{ 20.2 20 }	6	1½	6	6	4½	650	1-10 in. Q. 2-8 in. Q. 14-6 in. Q. 10-3 in. Q. 8 Smaller Q.	4
—	1902	1904	Francesco Ferruccio										1200	4-10 in. 8-7.5 in. Q. 16-3 in. Q. 2 Machine.	0
—	1907	1909	Pisa	9,956	19,000		{ 23.3 }						750		
—	1908	1910	San Giorgio	9,832	18,000	22.5	{ 23.4 24.04 }	8	1½	7	6½	7	1680	4-10 in. 8-7.5 in. Q. 16-3 in. Q.	0
—	1908	1910	San Marco		20,000 (T)								700	2 Machine.	3
													1500		

ITALY (Continued).

LIGHT CRUISERS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes
—	1885	1887	Etna	3,470	7,500	17.5	17.8	—	—	—	—	—	600	{ 4-6 in. Q. 2-4.7 in. Q. 8 Smaller Q.	3 0 0
—	1888	1890	Piemonte	2,597	12,000	21	22.3	—	—	—	—	—	—	{ 10-4.7 in. Q. 10 Smaller Q.	2 0
—	1892	1895	Marco Polo	4,511	10,000	19	17.8	4	1	4	nil	nil	600	{ 6-6 in. Q. 10-4.7 in. Q. 15 Smaller Q.	4 0 0
—	1891	1893	Etruria	2,245	7,500	18.5	19.84	—	—	—	—	—	430	{ 6-4.7 in. Q. 10 Smaller Q.	2
—	1894	1897	Calabria	2,428	4,000	16	16.4	—	—	—	—	—	500		0
—	1898	1900	Puglia	2,498	7,500	18.5	19.5	—	—	—	—	—	650		0
—	1911	1912	Quarto	3,300	22,500	29 {	29.5 {	—	—	—	—	—	800		2
—	1912	1913	Marsala (1)	3,380	25,000			—	—	—	—	—	0		
—	1911	1913	Nino Bixio(1)					—	—	—	—	—	—	—	—
—	1912	1913	Libya	3,690	12,500 (T)	22	—	—	—	—	—	—	600	{ 2-6 in. Q. 8-4.7 in. Q. 12 Smaller Q.	2 2 0
—	1914	1915	Basilicata	2,560	7,000	18 {	— }	—	—	—	—	—	—	{ 6-4.7 in. Q. 6-12 pr. Q. 2 Smaller Q.	nil
—	1914	1915	Campania					—	—	—	—	—	—	—	

(1) Have three torpedo tubes.

NOTE.—Marco Polo has a partial 4 in. belt.

DESTROYERS.

— *Fulmine*. Launched, 1898. Displacement, 298 tons. I.H.P. 4,800=28 knots. Armament, 5-6 pr. Q. and two torpedo tubes. Oil capacity, 60 tons.

— *Lampo*, *Strale*, *Dardo*, *Euro*, *Ostro*, *Nembo*, *Aquilone*, *Borea*, *Espero*, and *Zefiro*. Launched 1899-1904. Displacement, 315-325 tons. I.H.P. 6,000=30 knots. Armament, of first six, 1-12 pr. Q., 5-6 pr. Q., and two torpedo tubes; of the remainder, 6-6 pr. Q. and four torpedo tubes. Coal capacity, 60-80 tons.

— *Alpino*, *Artigliere*, *Bersagliere*, *Carabiniere*, *Corazziere*, *Fuciliere*, *Garibaldini*, *Granatiere*, *Lanciere*, and *Pontiere*. Launched, 1906-10. Displacement, 375-416 tons. Designed I.H.P. 6,200=29 knots. Armament, 4-12 pr. Q. and three torpedo tubes. Coal capacity, 82 tons.

— *Ascaro*. Launched, 1912. Displacement, 380 tons. I.H.P.—=29 knots. Other details as *Alpino*.

— *Animoso*, *Ardente*, *Ardito*, *Audace*, *Impetuoso*, *Indomito* (35'10), *Impavido*, *Insidioso*, *Irrequieto*. Launched, 1912-13. Displacement, 613 tons. I.H.P. (T) 15,000=30 knots. Armament, 1-4.7 in. Q., 4-12 pr. Q., and two torpedo tubes. Coal capacity, 100 tons.

Also 4 other destroyers of *Animoso* type, building for Turkish Navy by Orlando's, Leghorn, seized on outbreak of war with Turkey.

— *Antonio Mosto*, *Francesco Nullo*, *Giacinto Carini*, *Giuseppe Abba*, *Giuseppe Missori*, *Giuseppe Sirtori*, *Ippolito Nievo*, *Pilade Bronzetti*, *Rosolino Pilo*, *Simone Schiaffino*. Launched, 1914-15. Displacement, 770 tons. I.H.P. 15,000=30 knots. Armament as *Animoso*.

Alessandro-Poerio, *Cesare-Rossariol*, *Guglielmo-Pepe*. Launched, 1914-15. Displacement, 1,028 tons. Designed H.P.=32 knots (Turbines). Armament, 3-4.7 in. Q., 6-12 pr. Q., and four torpedo tubes.

ITALY (Continued).

DESTROYERS (Continued).

Carlo Mirabello, Carlo Alberto Racchia, Augusto Riboty. Building. Displacement, 1,540 tons. Designed H.P. ? = 35 knots (Turbines). Armament ? (Fitted as mine-layers.)

Arno. Launched, 1914. Displacement 500 tons (full load 600 tons). Designed H.P. ? = 30 knots (30.3 on trials) (Turbines). Armament as *Animoso*. (Originally built for the Portuguese Navy as *Liz*. Purchased by Italy in May 1915.)

Four destroyers built by Pattison, Naples. Launched, 1914-15. Displacement, 1,450 tons. Designed H.P. 40,000 = 35 knots (Turbines). Armament, 3.4.7 in. Q., 7-12 pr. Q., three or five torpedo tubes. (Originally laid down for Roumanian Navy as *Vifor, Viscol, Varlez, Vijclie*. Present Italian names not known.)

(Three destroyers of 500 tons displacement and 30 knots speed were reported to be building by Ansaldo's at Sestri-Ponente Yard in 1914-15 for the Chinese Navy. Present ownership not known.)

TORPEDO-BOATS.

- 1P.N.-12P.N., 130.S.-240.S., 25A.S.-32A.S., 33P.N.-38P.N., 39R.M., 40R.M. Launched, 1911-14. Displacement, 120 tons. I.H.P. (T) 2,800 to 2,900 = 27-32 knots. Armament, 1-3 pr. Q., and 2 torpedo tubes. Coal capacity, 30 tons.
- *Airone, Albatross, Alcione, Ardea, Arpia, Astore, Calliope* (26.38), *Calyppo, Canopo* (26.47), *Cassiopea, Centauro* (26.01), *Cigno* (26.4), *Climene, Clito, Olimpia, Orfeo, Orione, Orsa, Pallade* (26.65), *Pegaso, Perseo, Procione, Saffo, Sagittario, Scorpione, Serpente, Sirio, Spica*. Launched, 1905-07. Displacement, 205-217 tons. I.H.P. 2,900-3,000. Speed, 25 knots. Armament, 3-3 pr. Q. and three torpedo tubes. Coal capacity, 40 tons.
- *Gabbiano* (162 tons). Launched, 1907. I.H.P. 2,200 = 26 knots. Armament, 2-3 pr. Q. and two torpedo tubes.
- *Pellicano* (147 tons), *Condore* (136 tons). Launched, 1899 and 1898. I.H.P. 2,500 = 26 knots. Armament, 2-3 pr. Q. and two torpedo tubes.
- *Aquila, Avoltoio, Falco, Nibbio, and Sparviero*. Launched, 1888-90. Displacement, 139 tons. I.H.P. 2,200 = 26 knots. Armament, 2-3 pr. Q., 1-1 pr. Q., and three torpedo tubes. Coal capacity, 34 tons.
- Twenty-nine old torpedo-boats of 79 tons displacement. Launched, 1885-89. Original speed, 22 knots. Armament, 2-3 pr. Q. and two or three torpedo tubes. None of these have any fighting value.

SUBMARINES.

- *Delfino*. Launched, 1894. Displacement, 93-107. I.H.P. 150. Speed, 9-6. Armament, one torpedo tube. Has been reconstructed by Laurenti. Original design by Pullino.
- *Glaucio, Tricheco, Narvalo, Otaria, Squalo*. Launched, 1905-09. Displacement, 150-215 tons. I.H.P. 150-180. Speed, 14-7 knots. Armament, two torpedo tubes. *Glaucio* has three torpedo tubes.
- *Foca*. Launched, 1908. Displacement, 180-230 tons. I.H.P. 900. Speed 13-8 knots. Armament, two torpedo tubes.
- *Argo, Fisalia, Jalea, Jantina, Salpa, Velella, Zoea*. Launched, 1911-12. Displacement, 300-345 tons. I.H.P. 600. Speed, 13-8.5 knots. Armament, 2 torpedo tubes.
- *Argonauta* and ? . Launched, 1914. Details as *Argo* type above. Originally built for Russian and Roumanian Navies. Taken over by Italy on outbreak of war.

ITALY (Continued).

SUBMARINES (Continued).

- *Galileo Ferrari, Giacinto Pullino*. Launched, 1913. Displacement, 394-470 tons. I.H.P. 1,500. Speed, 15-9 knots. Armament, six 18 in. torpedo tubes. Radius of action on surface, 1,300 miles. Designed by Gino-Cavallini.
- *Atropo* 14'7. Launched, 1912. Displacement, 240-320 tons. I.H.P. 350-400. Speeds, 13-9 knots. Armament, 2 torpedo tubes. Radius of action on surface = 1,300 miles. Germania type.
- *Nautilus, (Nereide?)* Launched, 1913. Displacement, 400-485 tons. I.H.P. 600. Speed, 16-12 knots. Armament, three torpedo tubes. Designed by Bernardi. (Present existence of *Nereide* uncertain.)
- *Agostino-Barbarigo, Andrea-Provana, Sebastiano-Veniero, Giacomo-Nam.* Building. "Coastal" type of 600 tons and 13 knots surface speed.
- *Alberto-Guglielmotti, Angelo-Emo, Antonio-Pacinotti, Galvani, Lazzaro Mocenigo, Lorenzo-Marcello, Pietro-Micca, Torricelli.* "High-sea submarines." Displacement 700-1,070 tons. Designed H.P. 2,600. Speeds 18- knots. Armament, 5 tubes and guns.

(Also a large and specially fast submarine of about 700-1,000 tons displacement, engined with 2,600 H.P. Fiat motors for a surface speed of 18-20 knots. Originally built for Germany and now taken over by Italian Navy.)

- Four torpedo-gunboats—*Agordat* (1899) and *Coatit* (1899). Displacement, 1,313 tons. I.H.P. 8,000 = 23 knots. Armament, 12-12 pr. Q. and two above-water tubes. Coal capacity, 160 tons. *Iride, Aretusa* (1901). Displacement, 834-946 tons. Designed I.H.P. 4,000 = 20 knots. Present speed, 16-18 knots. Armament, 1-4'7 in. Q., 6-6 pr. Q., 3-1 pr. Q., and six torpedo tubes. Coal capacity, maximum 180 tons.

Two lagoon gunboats, *Malghera* and *Brondolo*. Launched, 1909, at Venice. Displacement, 106 tons. Speed, 12 knots. Armament, 3 small Q. Gunboat, *Sebastian Caboto*. Launched, 1912. Displacement, 800 tons. Speed, 13 knots with I.H.P. 2,000. Armament, 6-3 in. Q.

SEA-GOING FLEET AUXILIARIES.

Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armament.	Notes.
Bldg. 1913	1914	Anteo	215	1,100	14	2-6 pr. Q., 4 Smaller	River Gunboat
1904	1905	Bronte	9,490	4,000	8	—	Submarine Salvage-Ship
1893	1895	Elba	2,689	7,500	18'5	4-6 pr. Q.	Fleet Collier
1910	1911	Eridano	1,170	1,100	14	8-4'7 in. Q., 12 Smaller	Balloon-Ship
Bldg. —	—	E. Carlotto	—	—	—	2-3 pr. Q.	Fleet Tank
Bldg. —	—	Giove	10,310	—	—	—	Gunboat
1887	1889	Goito	357	3,600	19	7-6 pr. Q., 2 Smaller	Fleet Oil-Tanker
1880	1884	Italia	15,407	11,500	17'5	4-17 in., 8-6 in. Q.	Mine-Layer
1883	1887	Lepanto	15,549	15,000	18'5	4-4'7 in. Q., 30 Smaller Q.	Torpedo Training-Ship
1898	1894	Liguria	2,245	7,500	18'5	8-4'7 in. Q., 12 Smaller	Gunnery Training-Ship
1896	1892	Lombardia	2,351	7,500	18'5	6-4'7 in. Q., 10 Smaller	Balloon-Ship
1892	1894	Minerva	834	4,000	19	2-3 in. Q., 4-6 pr. Q.	Submarine Depot-Ship
1887	1889	Montebello	814	3,600	19	2-3 in. Q., 4-6 pr. Q., 2 Smaller	Mine-Layer
Bldg. —	—	Nettuno	10,310	—	—	—	Mine-Layer
1889	1890	Partenope	834	4,000	19	1-4'7 in. Q., 6-6 pr. Q., 3 Smaller	Fleet Oil-Tanker
1886	1887	Suetta	400	2,200	20	2-6 pr. Q., 8 Smaller	Mine-Layer
1905	1906	Sterope	9,490	4,000	15	4-6 pr. Q.	Gunnery Tender
1897	1893	Tevere	860	580	9	2-1 pr. Q.	Fleet Collier
1886	1883	Tripoli	848	3,600	19	2-3 in. Q., 4-6 pr., 2 Smaller	Fleet Tank
1884	1885	Vulcano	2,850	3,350	14'5	4-6 pr. Q.	Mine-Layer
							Fleet Repair-Ship

JAPAN. BATTLESHIPS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes
—	1894	1898	Tango*	10,960	10,600	17	17.25	9-15	3½	4	5-10	5	700 1050	4-12 in. 12-6 in. Q. 37 Smaller Q.	nil
—	1896	1897	Fuji	12,320	14,000	18	19.2	18	2½	4	6-14	6	750 1300	4-12 in. 10-6 in. Q. 16-3 in. Q. 4 Smaller Q.	0 4
—	1898	1899	Shiki-shima	14,850	14,500	18	18.76 18.6	9	3	6	8-14	6	700	4-12 in. 14-6 in. Q. 20-3 in. Q. 14 Smaller Q.	0
—	1899	1900	Asahi	15,200									1550	4-10 in. 10-6 in. Q. 20-3 in. Q. 26 Smaller Q.	4
—	1898	1901	Saga-mi*	12,674	14,500	18	19.12 18.51	6-9	2½	5	8-10	5	800	4-12 in. 4-10 in. 10-6 in. Q. 20-3 in. Q.	0
—	1900	1901	Suo*										2056	26 Smaller Q.	2
—	1900	1902	Hizen*	12,700	16,000	18	18.8	9	3	6	9-10	5	800 2000	4-12 in. 12-6 in. Q. 20-3 in. Q. 26 Smaller Q.	0 2
—	1900	1902	Mikasa	15,200	15,000	18	18.6	9	3	6	8-14	6	700 1520	4-12 in. 14-6 in. Q. 20-3 in. Q. 20 Smaller Q.	0 4
—	1902	1904	Iwami* (1)	13,516	16,000	18	18.3	10	4	6	8-11	6-7	800 2000	4-12 in. 6-8 in. Q. 20-3 in. Q. 28 Smaller Q.	1 2
—	1905	1906	Katori	15,950	17,000	18.5	20.9 19.5	9	3	6	5-9	6-8	750	4-12 in. 12-6 in. Q. 12-3 in. Q. 9 Smaller Q.	0 5
—	1905	1906	Kashima	16,400									2150	4-12 in. 12-10 in. 8-6 in. Q. 12 Smaller Q.	5
—	1906	1910	Satsuma	19,350	18,000	20	20.23	9	3	8	8-12	6	1000	4-12 in. 12-10 in. 8-6 in. Q. 12 Smaller Q.	0
—	1907	1911	Aki	19,780	24,000 (T)								2500	12-12 in. 10-6 in. Q. 12-4.7 in. Q. 8 Smaller Q.	5
—	1910	1912	Kawachi	20,800	26,500 (T)	20.5	21.5 20.5	12	2½	9	9	—	900	12-12 in. 10-6 in. Q. 12-4.7 in. Q. 8 Smaller Q.	0
—	1911	1912	Settsu										2500	12-12 in. 10-6 in. Q. 12-4.7 in. Q. 8 Smaller Q.	5
—	1914	1915	Fuso	30,000	45,000 (T)	22.5	—	12	2½	9	12	8	1500	12-14 in. 16-6 in. Q. 3 anti-aero Q.	0
—	1915	1916	Yama-shiro										3000		—
—	1916	1917	Hijuta												6
—	1916	1918	Ise												

BATTLE-CRUISERS

—	1905	1906	Tsukuba (2)	13,750	20,500	21	21.6 24.0	7	2	5	7	5-6	600	4-12 in. 12-6 in. Q. 12-4.7 in. Q. 6 Smaller Q.	0
—	1906	1907	Ikoma										2000	4-12 in. 8-8 in. Q. 14-4.7 in. Q. 11 Smaller Q.	2
—	1907	1909	Ibuki	14,600	24,000 (T)	22.5	22.17	7	2	5	7	5-6	600	4-12 in. 8-8 in. Q. 14-4.7 in. Q. 11 Smaller Q.	0
—	1907	1910	Kurama										2000		3
—	1912	1913	Kongo	27,500	34,000 (T)	27	27.6	10	2	7	9½	5-6	1000	8-14 in. 16-6 in. Q. 16 Smaller Q.	0
—	1912	1915	Hiyel										4000		—
—	1913	1916	Haruna												8
—	1913	1916	Kiris-hima												

* These ships were taken from the Russians.

(1) All of *Iwami's* details, except armament, are to original Russian design. Present displacement, H.P., and speed (after reconstruction by Japanese) are unknown.

(2) The load displacement of these ships is 15,150 tons.

JAPAN (Continued).

Battleships of Questionable Fighting Value.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes
— 1896	1898	Okinoshima*	4,126	5,700	16	{ 16.07 16.2 }	{ 8-10	3	nil	6-8	nil	260	{ 3-10 in. 4-4.7 in. Q. 14 Smaller Q.	nil	
— 1894	1895	Minoshima*	4,792												
												400	{ 4-10 in. 4-4.7 in. Q. 6 Smaller Q.	nil	
— 1888	1892	Iki*	9,672	8,000	15.5	15.9	6-14	3	nil	6-10	6	750	{ 2-12 in. 4-9 in. 6-6 in. Q. 4-4.7 in. Q. 9 Smaller Q.	nil	
												1200			

(ARMoured) CRUISERS.

—	1898	1899	Asama	9,700	18,000	21.5	{ 23 23.1 22.04 21.8	7	2½	5	6	6	550	{ 4-8 in. Q. 14-6 in. Q. 12-3 in. Q. 12 Smaller Q.	1	4			
—	1898	1899	Tokiwa										9,750				14,500	20.75	600
—	1899	1901	Idzumo (1)																	1900	1901	Iwate	1275
—	1899	1901	Azuma	9,436	17,000	20	21	7	2½	5	6	6	600	{ 4-8 in. Q. 12-6 in. Q. 12-3 in. Q. 8 Smaller Q.	1	4			
—	1899	1901	Yakumo	9,850	16,000	20	20.7	7	2½	5	6	6	600						
—	1900	1902	Aso*	7,726	17,000	21	22	8	2	2½	3	7	3½				750		
—	1902	1904	Kasuga	7,700	13,500	20	{ 20.2 20.52	6	1½	6	5½	6	1100	{ 2-8 in. Q. 8-6 in. Q. 20-3 in. Q. 7 Smaller Q.	0	2			
—	1903	1904	Nisshin										600						
													1150						

LIGHT CRUISERS. (2)

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Coal Capacity.	Armament.	
									Guns.	Tubes.
— 1889	1890	Chiyoda	2,450	5,600	17.5	19	420	{ 10-4.7 in. Q. 17 Smaller Q.	3 0	
— 1891	1893	Hashidate	4,277	5,400	17	{ 17 16.7 }	400	{ 1-12.5 in. 11-4.7 in. Q. 5-3 in. Q. 13 Smaller Q.	4 0	
— 1891	1893	Itsukushima						680		
— 1892	1893	Akitsushima	3,150	8,400	19		500	{ 4-6 in. Q. 6-4.7 in. Q. 10 Smaller Q.	4 0	

* These ships were taken from the Russians.

(1) These ships have only 8 smaller Q., and have no above-water torpedo tube.

(2) The first three ships in this Table have probably been sold and broken up or else relegated to non-military use as hulks.

JAPAN (Continued).
LIGHT CRUISERS (Continued).

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Coal Capacity.	Armament.	
									Guns.	Tubes.
—	1896	1898	Suma	2,657	8,500	20	{ 20.1 20.2 }	200	2-6 in. Q.	2
—	1897	1898	Akashi (1)					544	6-4.7 in. Q. 12 Smaller Q.	0
—	1898	1899	Chitose	4,760	15,500	22.5	{ 23.76 22.7 }	350	2-8 in. Q.	4
—	1898	1899	Kasagi					1000	10-4.7 in. Q. 12-3 in. Q. 6 Smaller Q.	0
—	1899	1902	Tsugaru*	6,630	11,600	20	19.2	900	8-6 in. Q.	4
								1400	20-3 in. Q. 8 Smaller Q.	0
—	1899	1900	Soya*	6,500	20,000	23	24.6	770	12-8 in. Q.	0
								1250	12-3 in. Q. 6 Smaller Q.	3
—	1902	1905	Niitaka	3,365	10,000	20	{ }	600	6-6 in. Q.	2
—	1902	1905	Tsushima					900	10-3 in. Q. 4 Smaller Q.	0
—	1903	1905	Otowa	3,000	10,000	21	*	600	2-6 in. Q.	2
								875	6-4.7 in. Q. 4-3 in. Q. 2 Smaller Q.	0
—	1907	1908	Mogami	1,329	8,000(T)	23	25	{ ? }	2-4.7 in. Q.	2
—	1907	1908	Yodogawa	1,230	6,500	22.5			4-3 in. Q.	0
—	1907	1909	Tone	4,035	15,000	23	{ }	750	2-6 in. Q.	0
								1000	10-4.7 in. Q. 2-3 in. Q. 2 Machine	3
—	1911	1912	Yahagi	4,950	22,500 (T)	26	{ }	750	6-6 in. Q.	0
—	1911	1912	Hirado					1000	4-3 in. Q.	—
—	1911	1912	Chikuma					1000	4 Machine	2

(1) Akashi has, in addition, four machine guns.
* These ships were taken from the Russians.

JAPAN (Continued).

DESTROYERS

- *Ikadzuchi* (?), *Kagero*, *Murakumo*, *Sazanami*, *Shiranui*, *Yugiri*. Launched, 1898-99. Displacement, 230-320 tons. Designed I.H.P. 5,800-6,000 = 31 knots. All exceeded this speed on trial. Armament, 2-12 pr. Q., 4-6 pr. Q., and two torpedo tubes. Coal capacity, 80-95 tons. (Present existence of *Ikadzuchi* is doubtful.)
- *Akebono*, *Oboro*, *Usugumo*. Launched, 1899-1900. Displacement, 280-340 tons. I.H.P. 6,000 = 31 knots. Armament, 2-12 pr. Q., 4-6 pr. Q., and two torpedo tubes. Coal capacity, 80-95 tons.
- *Satsuki* (ex *Biedovi*). Launched, 1902. Displacement, 350 tons. I.H.P. 5,700 = 27 knots. Armament, 1-12 pr. Q., 6-3 pr. Q., and three torpedo tubes. Coal capacity, 30 tons.
- *Yamahiko* (ex *Ryeshitleni*), *Fumitsuki* (ex *Silvi*). Launched, 1901-02. Displacement, 240 tons. I.H.P. 3,800 = 27 knots. Armament, 2-12 pr. Q., 4-3 pr. Q., and two torpedo tubes. Coal capacity, 80 tons.
- *Asagiri*, *Asashio* 31-057, *Kasumi* 33-8, *Murasame*, *Shirakumo* 33-21. Launched, 1901-02. Displacement, 363-375 tons. I.H.P. 5,700-7,000 = 31 knots. Armament, 2-12 pr. Q., 4-6 pr. Q., and two torpedo tubes. Coal capacity, 90-95 tons.
- *Arare*, *Ariake*, *Asakaze*, *Asatsuyu*, *Ayanami*, *Fubuki*, *Harukaze*, *Hatsuharu*, *Hatsushimo*, *Hatsuyuki*, *Hayakaze*, *Hibiki*, *Isonami*, *Kamakaze*, *Kikutsuki*, *Kisaragi*, *Matsukaze*, *Mikazuki*, *Minatzuki*, *Nagatsuki*, *Nenohi*, *Nowaki*, *Okaze*, *Oite*, *Shiguri*, *Shiratsuyu*, *Shirayuki*, *Ushio*, *Utsuki*, *Uzanami*, *Wakaba*, *Yayoi*, *Yudachi*, *Yuguri*, *Yunagi*. Launched, 1904-08. Displacement, 374 tons. I.H.P. 6,000 = 29 knots. Armament, 6-12 pr. Q. and two 18 in. torpedo tubes. All these boats were built in Japan.
- *Umikaze*, 33-46, *Yamakaze*. Launched, 1910-11. Displacement, 1,150 tons. I.H.P. (T) 20,500 = 33 knots. Armament, 2-4 in. Q., 5-3 in. Q., and four 18 in. torpedo tubes.
- *Sakura*, *Tachibana*. Launched, 1911-13. Displacement, 790 tons. I.H.P. (T) 18,600 = 33 knots. Armament, 2-4 in. Q., 4-12 pr. Q., and four 18 in. torpedo tubes.
- *Kawakaze*, *Urakaze*. Launched, 1914. Displacement, 955 tons. Designed H.P. 22,000. Speed, 33 knots. (Turbines and Diesel motors.) Armament, 2-4 in. Q., 5-12 pr. Q., 3 or 6 torpedo tubes.
- *Kaba*, *Kaede*, *Kashiwa*, *Katsura*, *Kiri*, *Kusu*, *Matsu*, *Sakaki*, *Sugi*, *Ume*. Launched, 1914-15. Details uncertain. Either similar to *Sakura* or *Kawakaze* types given above.

8 ocean-going destroyers projected.

TORPEDO-BOATS

- *Aotaka*, *Chidori*, *Hashitaka*, *Hato*, *Hayabusa*, *Hibari*, *Kamoni*, *Kari*, *Kasasagi*, *Kiji*, *Manadzuru*, *Otori*, *Sagi*, *Shirataka*, *Tsubame*, *Uzuri*. Launched, 1895-1904. Displacement, 137-150 tons. I.H.P. 4,200 = 27-30 knots. Armament (new), 1-12 pr. Q., 2-6 pr. Q., and three 14 in. torpedo tubes. Coal capacity, 30 tons.
- Nos. 29-32, 36-41, 43-46, 49, 60-68, 70-75. Launched, 1898-1903. Displacement, 85-110 tons. I.H.P. 1,200-2,600 = 24-27 knots. Armament, 2-3 pr. Q. and three 14 in. torpedo tubes. Coal capacity, 30 tons.
- There are 8 smaller torpedo-boats of 53 tons. Launched between 1893 and 1900, and carry one 3 pr. Q. and two 14 in. torpedo tubes.

JAPAN (Continued).

SUBMARINES.

- No. 1—No. 5. Built in sections at the Fore River Works, Quincy Point, Mass., U.S.A., and shipped to Japan in 1905-06. Displacement, 120 tons. Length, 58 ft. 9 in.; depth, 11 ft. 9 in. Surface speed, 9½ knots; submerged speed, 8 knots. Fitted with bilge keels. Armament, one torpedo tube.
 - No. 6—No. 7. Japanese designs and built in Japan. Launched, 1906. Displacement, 79-86 tons. Speeds, 9 and 7 knots. Armament, one torpedo tube.
 - No. 8—No. 13. Launched, 1908-11. Displacement, 290-325 tons. Length, 135 ft.; beam, 13 ft. 6 in. Speed, 14 knots on surface. Armament, two 18 in. torpedo tubes. Vickers type built at Barrow and Kawasaki.
 - No. 14—No. 15. Laubeuf "Dc" type, built in France. Launched, 1914. Displacement, 460-665 tons. Designed H.P. Speeds 17 and 10 knots. Armament, six torpedo tubes and Q.F. guns.
- Four or six boats either to be ordered in France or completing at Kobe, Japan. Numbers and all details unknown, but some will be large and fast Laurenti-F.I.A.T. boats built under licence at the Kawakasi Yard.

9 GUNBOATS: *Tatsuta*, 870 tons. I.H.P. 5,100=21 knots. Armament, 2-4.7 in. Q., four small Q., and five torpedo tubes. *Chihaya* (1900), 850 tons. I.H.P. 6,000=21 knots. Armament, 2-4.7 in., 4-12 pr. Q., three torpedo tubes. Coal, 250 tons. *Uji* (1903), 620 tons. Speed, 13 knots. Armament, 4-3 in. Q. and three machine guns. *Sumida* (1903), *Fushimi* (1906), 160 and 180 tons. Speed, 13 knots. Armament, four or five small Q. *Shikinami* (ex *Gaidamak*), *Makigumo* (ex *Vsadnik*), 1893. Displacement, 400 tons. I.H.P. 3,300 = 21 knots. Armament, nine small quick-firers and two torpedo tubes. *Toba* (1911), 250 tons. Speed, 15 knots. Armament, 2-12 pr. Q. *Saga* (1912), 800 tons. Speed, 14 knots. Armament, 1-4.7 in. Q., 3-12 pr. Q.

SEA-GOING FLEET AUXILIARIES.

Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armament.	Notes.
1899	1901	Amakusa	2,500	5,200	17.5	6-3 in. Q., 6-3 pr. Q.	Mine-Layer (ex Amur)
1900	1901	Hakuai Maru	2,600	—	13.5	—	Hospital-Ship.
1896	1897	Karasaki Maru	10,500	3,500	13	Few Small Guns	Submarine Mother-Ship
1900	1901	Kosai Maru	2,600	—	13.5	—	Hospital-Ship.
—	—	Kwanto Maru	6,190	—	13	—	Fleet Repair-Ship.
1909	1910	Natsushima	500	700	15	Few Small Guns	Mine-Layer
1913	1914	Sokuten Maru	—	—	—	—	Mine-Layer and Dépôt-ship
—	—	Tomoshima Maru	—	—	—	—	{ Ex-German, <i>Siu Mow</i> (captured 1914)
1888	1889	Toyohashi	4,200	2,000	12	2-4.7 in. Q., 6-3 pr. Q.	

MEXICO.

6 LIGHT CRUISERS OR CRUISER-GUNBOATS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Speed.	Coal Capacity.	Armament.	
								Guns.	Tubes.
1	1908	1908	Progrese (1)	1,590	1,400	14	—	{ 4-4 in. Q. ? Smaller Q.	—
2	1904	1905	Bravo	1,280	2,600	17	200	{ 2-4 in. Q. 6-6 pr. Q.	0
3	1904	1905	Morales						1
4	1902	1903	Tampico	1,000	2,400	16	170	{ 2-4 in. Q. 2-6 pr. Q.	0
5	1902	1903	Vera Cruz						1
6	1891	1892	Zaragoza	1,200	1,300	15.3	200	{ 2-4.7 in. Q. 2-6 pr. Q. 2-1 pr. Q.	Nil

(1) Sank by accident in 1914. Since salvaged and repaired.

3 Gunboats.—*Democrata* (1875), 450 tons. I.H.P. 600 = 11 knots. Armament, 2-100 pr. M., 12-20 pr. B. *Libertade, Independencia* (1874), 425 tons. I.H.P. 425 = 10 knots. Armament, 1-100 pr. M., 2-10 pr. B.

1 Transport.—*General Guerrero* (1908), 1,850 tons. I.H.P. 1,200 = 14 knots. Armament, 6-4 in. Q., 2-3 pr. Q.

NORWAY.

6 COAST DEFENCE BATTLESHIPS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armour Inches.					Coal Capacity.	Armament.	
							A	B	C	D	E		Guns.	Tubes
1	1896	1898	Harald	3,556	3,700	17	7	2	—	5-8	—	200	2-8 in. Q.	0
2	1897	1899	Haarfagre Tordenskjold									500	6-4-7 in. Q. 6-3 in. Q. 6 Smaller Q.	
3	1900	1901	Norge	3,847	4,500	16-5	6	2	—	6	5	400	2-8 in. Q.	0
4	1900	1901	Eidsvold									600	6-6 in. Q. 8-3 in. Q. 6 Smaller Q.	
5	1914	1915	Bjoergoin	4,825	4,500	15	7-4	2	—	8	6	—	2-9-4 in.	0
6	1914	1915	Nidaros										4-5-9 in. Q. 6-4 in. Q.	

Valkyrien.—Torpedo-gunboat of 374 tons. Launched in 1896, and armed with three small guns and two tubes. On trial with 3,300 I.H.P., she steamed 23-2 knots.

Viking (1891).—1,095 tons, 2,000 I.H.P., and 15 knots. Armament, 2-6 in. Armstrongs, ten small Q., and three tubes.

Frithjof (1896).—1,349 tons, 3,000 I.H.P., and 15 knots. Armament, 2-4-7 in. Q., ten small Q., and three tubes.

2 Old Monitors.—*Thor* (1872) and *Thrudvang* (1869), of 1,448-2,007 tons. Speeds, 6-8-5 knots. Armament since reconstruction in 1895-98, 2-4-7 in. Q. and 6 smaller Q.

28 Gunboats.—*Sleipner* (1877), 581 tons, *Heimdal* (1892), 620 tons, *Gor* (1885) and *Tyr* (1888), 280 tons, *Sarpen* (1860) and *Rjukan* (1860), 190 tons, *Agir* (1892), 387 tons, *Brage*, *Nor* (1878) and *Vidar* (1882), 260 tons, *Vale* (1874) and *Uller* (1876), 233 tons. Obsolete gunboats, armed with a few small guns, and having speeds of 8-12-5 knots. Some now used as mine-layers. Also *Ellida* (1880), 984 tons, I.H.P. 900=12 knots, submarine depot-ship, and fifteen 59-ton launches, carrying each a single 6-6 in. Palliser muzzle-loader and steaming 7-5 knots. A 20 knot Mine-Layer is being built.

3 Destroyers.—*Draug*, *Troll*, and *Garmo*. Launched, 1908-13. Displacement, 550 tons. I.H.P. 7,500=27 knots. Armament, 6-12 pr. Q. and three 18 in. torpedo tubes. These boats are fitted with wireless telegraphy. Coal capacity, 95 tons. A new destroyer is projected.

40 Torpedo-Boats.—*Hval*, *Delfin*, *Hai*, *Storm*, *Brand*, *Laks*, *Sael*, *Sild*, *Skrei*, *Trods*, of 102 tons displacement, 19-22 knots speed, and launched between 1896-1901. Armament, 2-1-4 in. Q. and two 18 in. tubes. *Skarv*, *Teist*, and *Kjell* of 90 tons displacement, 25 knots speed, and launched between 1907-12. Armament, 2-4 pr. Q. and two 18 in. torpedo-tubes. Twenty-seven second-class boats of 42 to 90 tons displacement and 18 to 25 knots speed. Six small 25-ton boats, launched in 1893, and carrying one tube each.

4 Submarines.—A1 (ex-*Kobben*). Launched, 1909. Displacement, 200-255 tons. I.H.P. 440-240. Speeds, 12 and 9 knots. Armament, three 18 in. torpedo tubes. A2-A4. Launched, 1909-13. Displacement, 250-350 tons. Speeds 14 and 9-10 knots. Armament, three-18 in. torpedo tubes. (A5 of this type seized by Germany on outbreak of war.) All above submarines built by Krupp's. Other submarines, to be built in Norway to Norwegian or U.S. Holland designs, are projected.

PERU.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Speed.	Coal Capacity.	Armament.	
								Guns.	Tubes.
1 (ARMOURED) CRUISER (Bought from France).									
1	1890	1893	Commandante Elias-Aquirre	6,300	13,000	18.6	$\frac{900}{1070}$	2-7.6 in. B. 6-6.4 in. Q. 4 Smaller Q.	$\frac{0}{2}$
4 LIGHT CRUISERS.									
1	1881	1882	Lima	1,700	1,800	16.25	300	2-6 in. B. 3-3 pr. Q. 4 Machine	Nil
2	1877	1879	Eclaireur	1,658	—	14	200	6-5.5 in. Q. 6 Smaller Q.	Nil
3	1906	1907	Coronel Bolognesi	3,180	14,000	24	500	2-6 in. B. 8-14 pr. Q. 8 Smaller Q.	$\frac{0}{2}$
4	1906	1906	Almirante Grau	3,200					

4 Gunboats.—*Santa Rosa* (1883), 420 tons. I.H.P. 150. Speed, 10 knots. Armament, 2 small guns, *Chalaio*, 2-12 pr. Q. *Iquitos*, *Constitucion*, 6-3 pr. Q. and two machine guns—used as a school-ship.

1 Destroyer.—*Teniente Rodriguez*, 28.5. Bought, 1912. Launched by the Schneider Co., 1911. Displacement, 500 tons, I.H.P. — = 28 knots. Armament, . Torpedo tubes

2 Submarines.—*Ferré*, launched 1911. *Palacios*, launched 1912. Displacement, 306-458 tons. Speed, surface 15 knots, submerged 8 knots. Armament, 5-18 in. torpedo tubes.

1 Transport.—*Havana* (1863), 1,400 tons.

PORTUGAL.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Speed.	Coal Capacity.	Armament.	
								Guns.	Tubes.
1 OLD BATTLESHIP.									
1	1875	1877 1903	Vasco de Gama	3,215	6,000	15.5	300	2-8 in. Q. 4-4.7 in. Q. 8 Smaller Q.	0 — 2
3 LIGHT CRUISERS.									
1	1896	1897	Adamastor	1,765	4,000	18	220 420	2-5.9 in. B. 4-4.7 in. Q. 7 Smaller Q.	0 — 2
2	1898	1899	São Gabriel	1,800	4,000	17.5	500	2-5.9 in. Q. 4-4.7 in. Q. 12 Smaller Q.	1 — 0
3	1898	1899	Almirante Reis	4,253	12,700	22	700 1000	4-6 in. Q. 8-4.7 in. Q. 24 Smaller Q.	2 — 3

10 Gunboats.—*Diu* (1889), 717 tons, 12 knots, 1-5.9 in., 2-4.7 in. Q., and 3 smaller. *Dom Luiz I.* (1895), 710 tons, 10 knots. *Patria* (1903), 620 tons, 15 knots. Armament, 4-4 in. Q. and 6 smaller Q. Coal, 100 tons. *Zaire* (1884), 580 tons, *Zambeze* (1886), 627 tons. Speeds, 10-11 knots. Armament, 1-6 in., 2 or 3-4 in. Q., and a few smaller. *Chaimita* (1898), *Save* (1908), *Lurio* (1907), *Beira* and *Ibo* (1912), 300-400 tons. Speed 12-13 knots. Armament, 2-3 pr. Q. guns, one or two machine guns.

5 Destroyers.—*Tejo* (1901, reconstructed 1911), 522 tons. I.H.P. 7,000 = 25.5 knots. Armament, 1-4 in. Q., 5 smaller Q., and two tubes. *Douro* (29.1) and *Guadiana* (30.3) (1912-13), 670 tons. I.H.P. 11,000 = 28 knots (Turbines). Armament, 1-4 in. Q., 2-12 pr. Q., two tubes. *Vouga* and *Tamega* building.

4 Torpedo-Boats.—Four obsolete vessels of no fighting value.

1 Submarine.—*Espadarte*. Launched October 5, 1912. Displacement, 245-300 tons. Speed, 13-8 knots. Armament, two torpedo-tubes.

1 Mine-Layer.—*Vulcano*. Launched, 1910. Displacement, 200 tons. I.H.P., 400 = 12 knots. Armament, 1-18 in. torpedo tube and 2 dropping gears.

The Portuguese Navy also includes a number of small river and coast service gunboats of no real value for purposes of war.

ROUMANIA.

Light Cruiser.—*Elisabetha* (1887), 1,320 tons. I.H.P. 3,000 = 17 knots. Armament, 4-4.7 in. Creusot Q., 6 small Q., and 4 torpedo tubes.—*Joan Bratiano*, *Lascar Carlgari*, *Lahovary*, *Mihail Cogalniceanu*. Monitors launched 1907. Displacement, 581 tons. I.H.P. 1,800 = 14 knots. Armament, 3-4.7 in. Q. in separate turrets, 2-4.7 in. howitzers, 4-3 pr. Q., and two machine guns. Complement, 80.—Eight torpedo-boats launched 1906-07. Displacement, 51 tons. I.H.P. 620 = 18 knots. Armament, 1-3 pr. Q., 1 machine gun, and 2 torpedo tubes. Three torpedo-boats of 26 knots and 100 tons were also completed 1907-8.

BATTLESHIPS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes
—	1900	1902	Panteleimon, B.S.	12,480	10,600	17	•	7-9	2½	6	10-12	5	670 1250	4-12 in. 16-6 in. Q. 14-3 in. Q. 28 Smaller Q.	0 5 5
—	1901	1902	Czarevitch	12,912	16,300	18	19-6	10	4	6	8-11	5	800 1360	4-12 in. 12-6 in. Q. 20-3 in. Q. 28 Smaller Q.	0 2 2
—	1903	1906	Slava	13,516	16,000	18	17-6	10	4	6	8-11	6-7	750 1250	4-12 in. 12-6 in. Q. 20-3 in. Q. 28 Smaller Q.	0 2 2
—	1906	1910	Ivan Zlatoust, B.S.	12,733	10,600	16	{ 17 }	7-9	2½	6	10-12	5-7	670	4-8 in. Q. 12-6 in. Q.	0
—	1906	1911	Evstafii, B.S.										1400	14-3 in. Q. 8 Smaller Q.	5
—	1906	1911	Andreie Per- vosvanni	17,200	17,600	18	{ }	6-11	3	6	10-12	5-7	1500	4-12 in. 14-8 in. Q.	0
—	1907	1911	Imp. Pavel I.										3000	20-4-7 in. Q. 14 Smaller Q.	5
—	1911	1914	Sevastopol	23,000	42,000 (T)	23	{ }	4-11	3	8	10-12	5	1500	12-12 in. 16-4-7 in. Q.	0
—	1911	1914	Pei'paulovsk										3000	8 Smaller Q.	4
—	1911	1914	Poltava										3000		
—	1911	1914	Gangut										3000		
—	1914	1915	Alexander III, B.S.	22,700	26,500 (T)	21	{ }	12	3	8	10-12	5	1500	12-12 in. 20-4-7 in. Q.	0
—	1913	1915	Imp. Marie, B.S.										3000	8 Smaller Q.	4
—	1914	1916	Ekaterina II, B.S.										3000		
—	Bldg	—	Ivan Grozni B.S.										3000		

BATTLE-CRUISERS.

—	Bldg	—	Borodino	32,200	66,000 (T)	27	{ }	9½	2½	7	9½	6	1500	12-14 in. Q.	0
—	Bldg	—	Navarino										3500	20-4-7 in. Q.	4
—	Bldg	—	Ismailia										3500	Smaller Q.	4
—	Bldg	—	Klabura										3500		

Battleships of Questionable Fighting Value.

—	1893	1896	Tri Sviatetilia, B.S.	13,318	10,600	17	18	16	3	16	12-16	5	750 1000 550	4-12 in. 10-6 in. Q. 4-4-7 in. Q. 4-10 in.	2 0 6
—	1896	1899	Rostislav, B.S.	8,880	8,500	16	17-9	8-15	3	6	6-9	5-6	800	8-6 in. Q. 16 Smaller Q.	0
—	1892	1896	G. Pobiedon- osetz, B.S.	10,280	13,000	16-5	16-5	9-16	2½	12	2	nil	700 870	6-12 in. 7-6 in. Q. 8-3 in. Q. 18 Smaller Q.	7 0 0
—	1887	1890	Alexander II.	9,244	8,000	16	16-5	6-14	3	nil	6-12	nil	800 1200	2-12 in. 4-8 in. Q. 8-6 in. Q. 22 Smaller Q.	5 0 0

(ARMoured) CRUISERS.

—	1896	1898	Rossia	12,130	18,000	20	20-25	5-10	2½	4	nil	2	1000 2500	4-8 in. 22-6 in. Q. 12-3 in. Q. 36 Smaller Q.	5 0 0
—	1899	1901	Gromoboi	12,336	18,000	20		6	2	nil	2-6	2-6	800 2500	4-8 in. 22-6 in. Q. 20-3 in. Q. 31 Smaller Q.	2 2 2
—	1906	1907	Rurik	15,170	19,700	21	21-425	6	1½	3	8	3-7	1200 2000	4-10 in. 8-8 in. Q. 20-4-7 in. Q. 18 Smaller Q.	0 2 2
—	1906	1908	Admiral Makharoff	7,900	16,500	21	{ 22-55 }	4-8	2	3½	3-7	3½	750	2-8 in. Q. 8-6 in. Q.	0
—	1906	1911	Bayan										1020	20-3 in. Q. 7 Smaller Q.	2

(1) B.S. = Black Sea. C = Caspian Sea.

RUSSIA (Continued).

LIGHT CRUISERS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in tons.	Designed L.H.P.	Designed Speed.	Best Known Speed.	Coal Capacity.	Armament.	
									Guns.	Tubes.
—	1900	1901	Askold	5,905	24,000	23	24.5	720	12-6 in. Q.	4
—	1899	1902	Diana	6,630	11,600	20	19.3	1100	12-3 in. Q.	—
—	1900	1902	Aurora	6,731				900	14 Smaller Q.	2
—	1902	1905	Kagul, B.S.	6,645	19,500	23	24.2	1400	8-6 in. Q.	4
—	1903	1904	Oleg					720	22-3 in. Q.	—
—	1903	1905	Pamyat Merkurya, B.S.					1100	8 Smaller Q.	0
—	1903	1904	Prut (?), B.S. (1)	3,432	12,500	22	22.2	300	12-3 in. Q.	0
—	1903	1903	Almaz, B.S.	3,285	7,500	19		600	14 Smaller Q.	2
—	Bldg	—	Ad. Grieg	7,500	(T)	30		560	2-6 in. Q.	2
—	Bldg	—	Ad. Butakov						8-4-7 in. Q.	—
—	Bldg	—	Ad. Spiridov						12 Smaller.	0
—	Bldg	—	Swietlana						3-4-7 in. Q.	nil
—	Bldg	—	Ad. Lazareff B.S.						8 Smaller Q.	2
—	Bldg	—	Ad. Nachimov B.S.							

(1) Ex-Turkish Cruiser *Medjidieh*, mined in Black Sea, salvaged and repaired at Russian Nicolaie Dockyard. Also reported to have been renamed *Admiral Korniloff*. Armament may now be different to that given.

DESTROYERS.

- 21 *Anastosov, Malyeev, Podvichni, Porazhayushchi, Poslushni, Prochni, Prozorlivi, Prutiki* (29-7), *Retivi, Ryani, Ryevoi, Serditi, Smyeli, Smyetlivi* (B.S.), *Slatni, Stremilelni* (B.S.), *Strogi* (B.S.), *Svirypei* (B.S.), *Tochni, Trevozhni, Tverdi*. Launched, 1895-1905. Displacement, 220-240 tons. I.H.P. 3,800=27 knots. Armament, 1-12 pr. Q., 3-3 pr. Q., and two torpedo boats. Coal capacity, 60 tons.
- 28 *Bezstrashni, Bezshumni, Bezposhadni, Bodri, Boiki, Bravi, Dostoini* (26-4), *Dyelni, Dyeyatelni* (26-1), *Gromyaschi, Grozni, Grozovoi, Lieut. Pushchin, Rasloropni, Razyaschi, Silni, Storozevoi, Stoini, Vidni, Vlastni, Zavidni* (B.S.), *Zavyelni* (B.S.), *Zharki* (B.S.), *Zhivoi* (B.S.), *Zhivuchi* (B.S.), *Zhutki* (B.S.), *Zorki* (B.S.), *Zvonki* (B.S.). Launched, 1899-1907. Displacement, 312-350 tons. I.H.P. 5,500-6,000=26-27 knots. Armament, 1-12 pr. Q., 5-3 pr. Q., and two torpedo tubes. *Vidni, Gromyaschi* and *Grozni* have three tubes. Coal capacity, 100 tons.
- 10 *Batelnii, Boevoi, Burni, Dmitriev, Zoyerev, Yurasovski, Sergiyev, Vnimatelni, Vninoslivi, Vnushitelni*. Launched, 1905-06. Displacement, 350 tons. I.H.P. 6,000=27 knots. Armament, 2-12 pr. Q., 5-3 pr. Q., and two torpedo tubes. Coal capacity, 200 tons.
- 11 *Iskusni, Ispolnitelni, Kryepki, Legki, Letuchi, Lieut. Burakov, Likhoi, Louki, Molodetski, Moshchni, Myetki*. Launched, 1906. Displacement, 330-345 tons. I.H.P. 5,000=26-27.5 knots. Armament, 2-12 pr. Q., six machine guns, and two torpedo tubes. Coal capacity, 100 tons.
- 8 *Donskoi-Kazak, Kazanetz, Steregushchi, Sirashni, Trushkmenetz, Ukraina, Voiskovoi, Zabaikaletz*. Launched, 1904-06. Displacement, 500 tons. I.H.P. 6,200=25-26 knots. Armament, 2-12 pr. Q., 4-6 pr. Q., and two torpedo tubes. Coal capacity, 120 tons.

RUSSIA (Continued).

DESTROYERS (Continued).

- *Amuretz, Dobrovolets, Emir Bukharski, Finn, Moskvityanin, Ussuriets.* Launched, 1905. Displacement, 570 tons. I.H.P. 6,500 = 25.5 knots. Armament, 2-12 pr. Q., 6-3 pr. Q., and three torpedo tubes. Coal capacity, 134 tons.
- *Gaidamak, Vsadnik.* Launched, 1905. Displacement, 570 tons. I.H.P. 6,500 = 25.5 knots. Armament, 2-4.7 in. Q., 6-6 pr. Q., two machine guns and three torpedo tubes.
- *Gen. Kondrachenko, Okhotnik, Pogranichnik, Siberski-Stryelok.* Launched, 1905. Displacement, 615 tons. I.H.P. 7,300 = 25.5 knots. Armament, 2-4.7 in. Q., 6-6 pr. Q., four machine guns, and three torpedo tubes. Coal capacity, 191 tons.
- (B.S.) *Kapt. Lieut. Baranoff, Lieut. Sheslakov, Kapt. Saken, Lieut. Zarezennii.* Launched, 1907, at Nikolaev. Displacement, 605 tons. I.H.P. 6,500 = 25 knots. Armament, 6-12 pr. Q. and three torpedo tubes. Coal capacity, 200 tons.
- *Novik 37.* Launched, 1911. Displacement, 1,260 tons. I.H.P. (T) 25,000 = 35 knots. Armament, 4-4 in. Q., 4 machine guns, and 4-18 in. torpedo tubes. Oil capacity, 450 tons.
- (B.S.) *Bespokoiny, Bystry, Dersky, Gneury, Gromky, Pospishny, Pilny, Pronslenny, Stchrestiv.* Launched, 1912-13. Displacement, 1,050 tons. I.H.P. (T) 22,500 = 34 knots. Armament, 3-4 in. Q., 4 machine guns, and five twin 18 in. torpedo tubes. Coal capacity, — tons.
- *Autroil, Azard, Briatschilaw, Chios, Dessna, Fendor-Stratilat, Gavril, Grenhamm, Grom, Grommonossez, Hochland, Kapitän Belli, Kap. Isylmetiev, Kap. Kern, Kap. Kingsbergen, Kap. Konon-Sotow, Konstantin, Kap. Kroum, Kulm, Letun, Leinart Dubassov, Lieut. Ilyin, Lieut. Lombard, Michael, Orfei, Patras, Poljäditel, Priamislav, Rymnik, Sabijaka, Samsoun, Smolensk, Ssokol, Stirsudden, Tenedos, Wladimir.* Building or projected. Displacement, 1,280-1,350 tons. Designed H.P. 30,000 to 36,000. Speed, 35-36 knots (Turbines). Armament 2 or 3-4 in. Q., 4 machine guns, 10 or 12 torpedo tubes. Generally similar to *Novik*.

NOTE.—These destroyers were to have been built in three groups of twelve, viz., first group, 1912-14; second group, 1913-15; third group, 1914-16. Out of the first dozen, five destroyers were to have been engined by the German firms of Schichau (Elbing) and Blohm & Voss (Hamburg)—*v. NAVY LEAGUE ANNUAL*, 1913-14, p. 152. Engines were probably delivered in Russia before outbreak of war. The last group of twelve destroyers may not be proceeded with.

- Eight destroyers building or projected for Black Sea Fleet. Four laid down at Nicolaieff, 1914. No details available.

TORPEDO-BOATS.

- Launched between 1897-98. Displacement, 118-120 tons. Speed, 26 knots. Armament, 2-1 pr. Q. and two torpedo tubes. Coal capacity, 17 tons.
- Nos. 214-220, 222, 223. Launched, 1902-03. Displacement, 150 tons. I.H.P. 4,200 = 30 knots. Armament, 2-3 pr. Q. and one torpedo tube. Coal capacity, 40 tons.
- Nos. 212-213. Launched, 1902. Displacement, 186 tons. I.H.P. 2,500 = 24 knots. Armament, 3-1 pr. and three torpedo tubes. Coal capacity, 50 tons.

RUSSIA (Continued).

SUBMARINES.

- *Delfin, Kasatka, Skat, Naliv, Makrel, Graf-Sheremetiev, Okun.* Launched, 1904-08. Designed by Mr. Bubnov, from plans submitted by Captain Beklerovskiff. Displacement on the surface, 115-145 tons; submerged, 150-200 tons. Speed on surface, 6.5-8 knots; submerged, 6 knots or less. Armament, two to four torpedo tubes. Motive power, oil engines and electric motors.
 - *Byeluga, Losos, Peskar, Schuka, Som, Sterlyad, Sudak.* Launched, 1904-08. Early Holland type. Displacement, 110-120 tons. Speed, 9.5 knots on the surface, and 6-7.5 knots submerged. Armament, one torpedo tube. Motive power, gasoline engines and electric motors.
 - *Buichok, Kejal, Osetr, Paltus, Plotnar, Sig.* Launched, 1905. Lake type. Displacement, 135 tons on the surface, 175 tons submerged. Speed, 10 knots on the surface, 7 knots submerged. Armament, three torpedo tubes. Motive power, gasoline engines and electric motors. *Osetr* was formerly the *Protector*.
 - *Karp, Karas.* Launched from the Germania-Werft, 1907. Displacement, 190 tons on the surface, and 240 tons submerged. I.H.P. 250. Speed, 10.5 knots on the surface, 8 knots submerged. Armament, one torpedo tube. Motive power, kerosene engines, electric motors. A third, *Kambala*, was sunk in June 1909 off Sevastopol, with a loss of eighteen lives. Has been raised.
 - *Alligator, Dragon, Kaiman, Krokodil.* Launched, 1908. Lake type of boat. Displacement, 450-500 tons. I.H.P. 1,200. Speed, 15 knots on surface and 6.5 knots submerged. Armament, 2-3 pr. Q., 2 machine guns, four torpedo tubes. Motive power, gasoline and electric motors.
 - *Akula.* Launched, 1909. Bubnov experimental boat. Displacement, 360-400 tons. Armament, two torpedo tubes.
 - *Minoga.* Launched, 1908. Bubnov experimental boat. Displacement, 117-177 tons. Speed, 8-12 knots. Armament, two torpedo tubes.
 - *Kit, Kachalot, Narval, Morge, Tulene, Nerpa.* Launched 1913. (B.S.) Displacement, 460-610 tons. I.H.P. surface, 1,200 = 15 knots; submerged, 800 = 11.5 knots. Armament, nine torpedo-tubes.
 - *Krab.* (B.S.) Submarine mine-layer. Launched, 1913. Displacement, 500-700 tons. Speed 16 and 8 knots. Armament, two torpedo tubes and sixty mines. Motive power, Curtis turbines on surface, electric motors submerged.
 - *Bars, Forel, Gepard, Jaguar, Jasj, Jedinorog, Jorsch, Kaguar, Leopard, Lwiza, Pantera, Ryss, Smäta, Tigr, Tup, Ugor, Vyopr, Wolk.* Building or completing. No details available.
- Six submarines under construction in Black Sea. Names and details not known.
- Torpedo gunboats. *Abreck* (1896, 675 tons), *Griden* (B.S. 1893, 400 tons), *Voevoda* (1892, 415 tons), *Pesadnik* (1892, 394 tons), *Kasarski* (B.S. 1889, 400 tons). They steam 18-21 knots, and carry six to ten small quick-firers and two to five torpedo tubes.
 - Gunboats: *Khrabri* (1895) 1,735 tons and 14.5 knots, with 2,100 I.H.P. Her armament is 2-8 in., 1-6 in., 10 small Q., and a torpedo tube.
 - *Grozyaschi* (1890) 1,627 tons and steamed 15 knots with 2,000 I.H.P. Her armament is 1-9 in., 1-6 in., 8 small Q., and two torpedo tubes.
 - *Khivenets* (1904), 1,430 tons and 13 knots speed. Armed with 2-4.7 in. Q., 8-12 pr. Q.

RUSSIA (*Continued*).

GUNBOATS (*Continued*).

Bobr, Giliak, Koriets (1906-7), 875 tons and 12 knots speed. Armed with 2-4.7 in. Q. and 4-12 pr. Q.

Terets (B.S.) (1888), 1,300 tons and 11 knots speed. Armed with 2-8 in., 1-6 in. Q., and seven smaller guns.

Ardagan (C), *Kars* (C), Launched, 1909. Displacement, 620 tons. I.H.P. (Diesel Motors) 1,000 = 14 knots. Armament, 2-4.7 in. Q., 4-3 in. Q., and four machine guns.

Ten gunboats have been built (1909-10) for service on the Amur. They have been named *Orotchanine, Mongole, Bouriate, Vogoul, Sibiriak, Kordle, Kirghize, Kalmyk, Zyrianine, and Voliak*.

Eight gunboats of 946 tons (1909-10), *Shqual, Shtorme, Smertch, Groza, Vikhr, Vionga, Tsifune* and *Ouagane*. I.H.P. (Diesel Motors) 250 = 11 knots. Armament, 2-6 in. Q., 4-4.7 in. Q., seven machine guns.

SEA-GOING FLEET AUXILIARIES.

Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armament.	Notes.
1907	1908	Amur	2,926	4,700	17.5	1-4.7 in. Q., 11-3 in. Q., 4 Smaller	Mine-Layer
1896	1897	Anadyr	12,000	6,000	13	Some Small Guns	Submarine Depot-Ship
1900	1901	Angara	6,000	2,000	12	do. do.	Destroyer Depot-Ship
1896	1898	Bakan	833	3,800	11	4 Small Guns	Tender
1901	1901	Bogatyr	6,645	19,500	23	Some Small Guns	Mine-Layer
1891	1893	Bug	1,360	2,800	14	6-3 pr. Q., 4 Smaller	Mine Transport
1891	1893	Duna (a)	1,360	2,800	14	6-3 pr. Q., 4 Smaller	"
1895	1896	Chabarovsk	2,760	1,800	12.5	"	Submarine Mother-Ship
1896	1897	Kronstadt (a)	16,000	—	13	4-3 pr. Q.	Fleet Repair-Ship
—	1878	Ladoga	5,136	5,300	10	—	Mine-Layer
1911	1911	Mesen	2,000	—	—	—	Ice-breaking Collier
—	1873	Narova	5,000	4,500	12	—	Mine-Layer
1910	1910	Oka	2,000	—	—	—	Fleet-Repair Ship
1902	1904	Okean	12,000	11,000	18	2-4 in. Q.	"
—	1875	Oncga	5,000	5,600	13	—	Mine-Layer
1910	1910	Pechora	2,000	—	—	—	Ice-breaking Collier
—	1911	Suchona	2,000	—	10	—	"
1911	1913	Volchov	2,400	—	10	—	Submarine Depot-Ship
1904	1906	Velga	1,452	1,600	13	4-3 pr. Q.	Mine-Layer
1900	1901	Xenia	6,000	—	13	Some Small Guns	Submarine Mother-Ship

Also various ice-breakers, mine-sweepers and mine-laying craft, mercantile vessels, and small craft requisitioned for various war duties in the Baltic and Black Sea.

NOTE.—Various ice-breaking ships belonging to the Canadian Navy have been transferred to the Russian Navy for the duration of the war.

SPAIN.

4 BATTLESHIPS—4 COMPLETE.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armour Inches.					Coal Capacity.	Armament.	
							A	B	C	D	E		Guns.	Tubes.
1	1887	1890	Pelayo	9,744	9,000	16	17½	4	nil	19½	4	800	2-12·5 in. 2-11 in. 9-5·5 in. Q. 18 Smaller Q.	7 0
2	1912	1914	España	15,460	15,300	19·5	4-0	2½	6	10	6	800	8-12 in. 20-4 in. Q. 4 Smaller Q. 2 Machine	nil
3	1913	1916	Alfonso XIII.									1900		
4	1913	1915	Jaime I.									1900		

3 (ARMOURED) CRUISERS.

1	1895	1898	E. Carlos V.	9,089	18,500	20	2- $6\frac{1}{2}$	2	nil	10	2	1200	{ 2-11 in. 8-5·5 in. Q. 4-3·9 in. Q. 12 Smaller Q.	<hr/> 6 0
2	1896	1904	P. de Asturias	6,889	15,000	20-25	10-12	2	nil	10 $\frac{1}{2}$	2 $\frac{1}{2}$	1200	{ 2-11 in. 10-5·5 in. Q. 12 Smaller Q.	<hr/> 2 0
3	1900	1906	Cataluna											

4 (LIGHT) CRUISERS.

1	1916	—	(No. 1.)	5,600	25,500	26	1½	2	—	4	—	—	{ 9-6 in. Q. 4-12 pr. Q.	0 2
2	1917	—	(No. 2.)											
3	1918	—	(No. 3.)											
4	1919	—	(No. 4.)											

3 Old Light Cruisers.—*Reina Regente* (1906), 5,287 tons. I.H.P. 6,500=20 knots. Armament, 10-5·5 in. Q., 22 Smaller Q.; three torpedo tubes. *Estramadura* (1900), 2,030 tons. I.H.P. 7,000 = 20 knots. Armament, 8-4 in. Q., 7 smaller Q. *Río de la Plata* (1898), 1,773 tons. I.H.P. 7,000=20 knots. Armament, 2-5·5 in. Q., 4-3·9 in. Q., 10 smaller Q.; two torpedo tubes. Coal, 270 tons.

3 Torpedo-Gunboats.—*Don Alvaro de Bazan* (1897), *Dona Maria de Molina* (1896), *Marques de la Victoria* (1897), 810 tons. I.H.P. 2,500=19 knots. Armament, 2-4·7 in. Q., 6 smaller Q., and four tubes.

6 Gunboats.—*Bonifaz*, *Lauria*, *Laya*, *Recalde*. Launched, 1911-12. Displacement, 300 tons. Designed I.H.P. 1,100 = 13 knots. Armament, 4-3 in. Q., 2 machine guns. *Marques de Molins* (1891), *Temerario* (1889), 562-610 tons. I.H.P. 2,600 = 12-15 knots. Armament, 2-4·7 in., 5 small Q., and two tubes. Coal, 106 tons.

(3 new gunboats to be built under new Naval Programme.)

7 Destroyers.—*Bustamante*, *Villamil*, *Requiescens*. Launched, 1911. Displacement, 370 tons. Designed I.H.P. (T) 6,250 = 28 knots. Armament, 5-6 pr. Q. and 2 18 in. torpedo tubes. *Terror*, *Audaz* (1896, 300 tons), *Osado*, *Proserpina* (1897, 400 tons). I.H.P. 6,000-7,500 = 28-30 knots on trial. Armament, 2-3 in. Q., 4 smaller Q., and 2 18 in. tubes. Coal, 100 tons.

(6 new destroyers to be built under new Naval Programme.)

26 Torpedo Boats. Nos. 1-24 launched, 1911-13. Displacement, 180 tons. Designed I.H.P. 3,750 (T) = 26 knots. Armament, 3-3 pr. Q. and 3 18 in. torpedo tubes. Also two other old torpedo boats, Nos. 41 and 45, built in 1886-87.

(28 Submarines provided for by new Naval Programme.)

(18 Coastguard vessels provided for by new Naval Programme. To be built for mine-laying and mine-sweeping.)

SWEDEN.

15 COAST DEFENCE BATTLESHIPS—12 COMPLETE.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	• Armour Inches.					Coal Capacity.	• Armament.	
							A	B	C	D	E		Guns.	Tubes.
1	1886	1887	Svea	3,051	4,650	15	8-	2	—	5-7½	4-5	200	1-8-2 in. Q.	0
2	1890	1891	Göta	3,238			11½	—	—	—	—	300	7-6 in. Q.	—
3	1892	1894	Thule	3,248			—	—	—	—	—	300	14 Smaller Q.	1
4	1896	1898	Oden (1)	3,445	5,000	16	9½	2	—	8-10	2½	275	2-10 in.	0
5	1898	1899	Thor				—	—	—	—	—	275	6-4-7 in. Q.	—
6	1898	1899	Njord				—	—	—	—	—	275	12 Smaller Q.	1
7	1900	1901	Dristigheten	3,445	5,570	17	7	2	—	5-8	2½-4	300	2-8-2 in. Q.	0
8	1901	1902	Aeran				—	—	—	—	—	300	6-6 in. Q.	—
9	1901	1903	Wasa				—	—	—	—	—	400	12 Smaller Q.	2
10	1901	1904	Tapperheten	3,612	6,500	18	4-6	2	—	5-7½	3-5	350	2-8-2 in. Q.	0
11	1904	1906	Manligheten				—	—	—	—	—	500	8-6 in. Q.	—
12	1905	1907	Oscar II.	4,203	8,500	18	4-6	2	4	5-7½	3-5	500	13 Smaller Q.	2
13	1915	—	Sverige	6,770	20,000	22-5	4-8	2	—	4-6	8	350	4-11 in.	0
14	Bld.	—	Drottning Viktoria				—	—	—	—	—	350	8-6 in. Q.	—
15	Pro.	—	Gustav V.				—	—	—	—	—	700	8 Smaller Q.	2

(1) Oden only 4-4-7 in. Q.

1 (ARMoured) CRUISER

1	1905	1907	Fylgia	4,100	12,440	22-8	4	2	—	2-5	—	350	8-6 in. Q.	0
												900	14-6 pr. Q.	2

5 Torpedo Gunboats.—*Ornen* (1890), *Jacob Bagge*, *Claes Horn*, *Claes Ulga* (1898), *Psilander* (1899), of 785 tons, 4,000 I.H.P., and 20 knots designed speed. Armament, 2-4-7 in. Q., 4-6 pr. Q., and one tube.

3 Old Cruisers.—*Freya* (1885, 1,968 tons), *Saga* (1878, 1,530 tons), *Balder* (1870, 1,880 tons). Armament, 7-12 old guns of 4-7 in. and 6 in. calibre, and half a dozen or so quick-firers and machine guns. Speeds, originally, 12 knots.

4 Old Monitors.—*John Ericsson*, *Thordon*, *Tirfing* (1,500 tons), *Loke* (1,600 tons). Launched, 1865-71. Speed, 6-5-8 knots. Armament, new, 2-5-9 in. Q., and ten smaller Q. Reconstructed 1898-1904.

7 Armoured Gunboats.—*Berserk*, *Bjorn*, *Folke*, *Gerda*, *Hildur*, *Solve*, and *Ulf*. Launched, 1872-76, and reconstructed 1897-1905. Displacement, 460 tons. Speed, 8 knots. Armament, 1-4-7 in. Q. and two smaller Q.

9 Gunboats.—*Fenris* (1872, 260 tons), *Rota*, *Skuld* (1880), all 536 tons, *Disa* (1877), 500 tons, *Alfhild* (1863) and *Sigrid* (1826), 190 tons, and three £14,100 guard gunboats. Many of these have been modernised and carry a single 4-7 in. Q. or 5-9 in. Q., in addition to several smaller guns. Originally they mounted a 10-6 in. B. abaft the foremast. Speed, 6-13-5 knots.

8 Destroyers.—*Mode* (1902, 32-38 knots), *Magne* (1905, 30-7 knots), *Wale* (1906, 33 knots), *Ragnar*, *Sigurd* (1907, 30-66), *Vidar* (1908), *Hugin* (1909), *Mumin* (1910). Displacement, 350-430 tons. I.H.P. 7,000 = 30 knots. Armament, first three, 1-12 pr. Q. and 5-6 pr.; last nine, 2-12 pr. Q. and 4-6 pr. Q. Two 18 in. tubes in all. *Hugin* and *Mumin* have turbines.

SWEDEN (Continued).

- 54 Torpedo-Boats (38 first-class).—Launched, 1894-1909, and building. Displacement, 86-110 tons. Speeds, 23-26 knots. Armament, 2 small Q. and two tubes in all. *Arcturus* steamed 25'88 and *Antares* 25'44 knots. Also fourteen new and eight old second-class boats of little value.
- 10 Submarines.—*Hajen*, a Holland of 127-107 tons. Built at Stockholm, 1904. Speed, 7-10-5 knots with 200 I.H.P. Armament, one tube and three torpedoes. *Hvalen* (No. 1) and Nos. 2-4. Launched, 1908-1911. Displacement, 230-180 tons. I.H.P. 750. Speed, 8-15 knots. Armament, two torpedo tubes.

Svådfisken and *Tumlaren* (Nos. 5 and 6). Launched, 1913-4. Fiat type built under licence at Malmö, Sweden. Displacement, 250-370 tons. Speeds 15 and 8 knots.

Aborren, *Delfin*, and *Gäddan* (Nos. 7, 8 and 9). Launched, 1914-15, and building. Fiat type built under licence at Malmö, Sweden.

Fleet Auxiliaries.—Three Mine-Layers, *Roda* (1878), 540 tons. H.P. 780 = 13 knots. Guns, 1-4-7 in. Q., and two machine guns. *Edda* (1882), 640 tons. H.P. 960 = 13 knots. Guns, 4-6 pr. Q.. *Clas Fleming* (1913), 1,400 tons. H.P. = 20 knots (Turbines). Guns, 4-4-7 in. Q. and six machine guns. One Submarine Depot-Ship, *Skaggald* (1879, reconstructed 1913), 540 tons, 13 knots speed. Guns, 4-12 pr. Q. Ice-Breaker and Repair Ship, ex-gunboat *Svenskund* (1891), 400 tons, 12 knots speed. Guns, 2-6 pr. Q. One Balloon Ship of 260 tons. One Hospital-Ship, *Verdane* (1878), 514 tons, 13 knots speed.

TURKEY.

SPECIAL WAR NOTES.

On July 16th, 1914, Messrs. Vickers, Ltd., of Barrow-in-Furness, signed a contract for the construction of a new Turkish *Dreadnought*. This ship's name was reported to be the *Sultan Mehmed Fatih*, and her approximate details were:

25,100 tons displacement. Speed, 21-22 knots (Turbines). Armament, 10-13.5 in., 16-6 in. Q., 4-12 pr. Q., and five submerged torpedo tubes.

Preparations were made for laying this ship down, but it is very doubtful if she was begun before the outbreak of war.

The German battle-cruiser *Goeben* and light cruiser *Breslau* were "sold" to Turkey in 1914 and now appear in German and Turkish Official Reports as the *Sultan Yawuz Selim* and the *Midilli* respectively. Since the "sale" was obviously spurious and a belligerent warship cannot change her nationality, the *Goeben* and *Breslau* are retained in the German Tables.

Old Battleship.—*Torgut Reis* (1893). Displacement, 9,874 tons. I.H.P. 10,000 = 17 knots. Armament, 6-11 in. B. (old), 8-4.1 in. Q., and smaller. Three torpedo tubes, two submerged and one above water; latter probably removed. This ship was originally the German battleship *K. F. Wilhelm*, which Turkey was forced to buy from Germany in 1910 for twice her actual value.

Old and small Battleship.—*Muin-i-Zaffer*. (1860, and reconstructed by Ansaldo's, 1902-6.) 2,134 tons. I.H.P. 2,200. Speed originally was 12½ to 14 knots, but is much less now. Armour (iron): 9-3 in. waterline belt, 1½ in. deck, 9-6 in. battery. Armament, 4-6 in. Q., 6-12 pr. Q., 10-6 pr. Q., 2-3 pr. Q., 4 machine guns, and one torpedo tube. Guns probably all removed and mounted ashore for coastal defence. Coal 600 tons. This ship is more or less worthless.

Light Cruiser.—*Hamidiye* (1903), 3,800 tons. H.P. 12,500. Designed speed was 22 knots, but this ship has been severely damaged both in the Balkan War by torpedoes, and in the Black Sea during the present war by mines. Her present speed is much below 22 knots. Armament, 2-6 in. Q., 8-4.7 in. Q. and 12 smaller Q.F. guns (probably removed), and two torpedo tubes. Coal capacity, 600 tons.

GUNBOATS.—

(NOTE.—Various unidentified Turkish gunboats and torpedo-craft have been sunk during the war, including one gunboat of the *Aidin Reis* type and one of the *Aintab* type. But only those gunboats, etc., sunk whose names are known have been struck out of the following lists.)

Seyat, Furat (1883), 200 tons. H.P. 100 = 10 knots. Guns, 2 old 3-in. and 2-6 pr. Q. Practically worthless.

Zuhof, Kilid-el-Bahr (1894), 800 tons. H.P. 160 = 12.7 knots. Guns, 4-4.7 in. Q., 6 machine guns, and two torpedo tubes. Coal capacity 120 tons.

Berek-i-Zaffer, Nasri Huda, Nouril Bahr, Shevket Numa, Siak-i-Shadi, Timsah-Reschamieh. Launched, 1894-1903. Displacement, 195 tons. H.P. 450 = 12 knots. Guns, 2-12 pr. Q., 2-3 pr. Q. Two torpedo tubes (above water).

Josgad, Kastamuni. Launched, 1906. Displacement, 185 tons. Twelve knots speed. Guns, 2-3 pr. Q.

Aintab, Bajra, Malatia, Nerischehir, Ordu, Quikedjedok, Refadiye, Taschkepru. Launched in France 1907-08. Displacement, 210 tons. H.P. 325 = 13 knots. Guns, 2-3 pr. Q., and two machine guns. (Five or six gunboats of this class were sunk on Jan. 7th, 1912, in the Turco-Italian War, but their names cannot be ascertained. The class now comprises only three or four of the ships named.)

Aidin-Reis, Giassia-Reis, Preveza, Sakiz. Launched, 1912-13, at St. Nazaire and La Seyne Yards, France. Displacement about 500 tons. H.P. 1,025 = 14 knots speed. Guns, 2-3.9 in., 2-3 pr. Q., two machine guns.

TURKEY (Continued).

Destroyers.—*Berk-Eftshan* (and *Tatjar*?). Launched, 1894. 270 tons. H.P. 3,400 = 25 knots. Guns, 4-1 pr. Q. and two torpedo tubes.

Samsoun, Basra, Tachoz (1907). 305 tons. H.P. 6,000 = 28 knots. Guns, 2-12 pr. Q. and two tubes. Coal capacity, 60 tons.

Mouvanets-i-Millet, Jadikar-i-Millet, Gairet-i-Watanieh, Numune-i-Hamid-jeh. Launched, 1909. Originally built for the German Navy as the S165-168; purchased by Turkey in 1910. Displacement, 607 tons. H.P. 12,000 = 30 knots. Guns, 2-4-1 in. Q., two machine guns and three torpedo tubes. Coal capacity, 160 tons.

Torpedo Boats.—*Abdul Meschid, Younis* (1901), 145 tons. H.P. 2,400 = 26 knots. Guns, 2-3 pr. Q., two tubes. Also *Ak-Hissar* (1904), *Dratsch, Kutahija, Mossul, Urfa* (1906), 160 tons. Other details as *Abdul Meschid*.

Sultan-Hissar, Sivri-Hissar (1908). 270 tons. H.P. 3,400 = 25 knots. Guns, 2-1 pr. Q., two torpedo tubes.

Also 21 Smaller Torpedo Boats:

6 launched 1885-9, 40-45 tons, 20 knots speed.

14 launched 1886-1890, 85 tons, 21-22 knots speed.

1 (*Edjadaz*) launched 1890. 120 tons. 24 knots speed.

All have two tubes and one or two tubes. Practically worn out and only fit for the scrap-heap.

Submarines.—(*Achmed*?) (ex-French submarine *Turquoise*). Launched, 1908; captured in the Dardanelles, 1915. Displacement, 383-445 tons. H.P. 600. Speeds, 12 and 8 knots. Armament, six tubes. (Reported to have foundered with Turkish crew.)

Also other British and French submarines captured in the Sea of Marmora or the Dardanelles. No details available. Other submarines transported in sections from Germany and reassembled at Constantinople. Large German submarines of the "C" and "D" types (see German Tables) are operating in the Eastern Mediterranean and Aegean Seas.

Auxiliaries.—Four trawlers were bought in England in 1914 for conversion to mine-sweepers. A lot of other steamers, ferry-boats, sailing craft, Customs motor-boats, and old craft have been requisitioned for various war duties.

URUGUAY.

Uruguay. Scout built at Stettin. Launched, 1909. Displacement, 1,250 tons. Designed I.H.P. 5,700 = 25 knots. Armament, 2-4-7 in. Q., 4-3 in. Q., 6-3 pr. Q., 6 machine guns, and two torpedo tubes. Coal capacity, 210 tons = 3,000 miles at 12 knots.

General Saurez, 300 tons. Training ship of 12½ knots speed, and armed with 2-4-7 in. Q. and a few small Q. *General Artigas* (1884), 832 tons, 9 knots speed. Guns, 2-12 pr. Q. and two machine guns. A despatch vessel, *Malvinas*, of 400 tons. Also 13 transports and steamers.

UNITED STATES OF AMERICA.

38 BATTLESHIPS—31 COMPLETE.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal & Oil Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes.
1	1898	1900	Kearsarge	11,540	10,500	16	16-82	16½	2½	5	12½	5½	410	4-13 in.	nil
2	1898	1900	Kentucky				16-9	16½	2½	5	12½	5½	1210	4-8 in.	
3	1898	1900	Alabama	11,566 (12,200)	10,500	16	17-45	16½	4	5½	10-	5½	850	18-5 in. Q.	nil
4	1898	1901	Illinois				17-45	16½	4	5½	10-	5½	850	4-13 in.	
5	1898	1901	Wisconsin	12,300 (13,500)	16,000	18	17-17	11	2½	6	8-12	6	1450	14-6 in. Q.	0
6	1901	1902	Maine				18-9	11	2½	6	8-12	6	1000	8 Smaller Q.	
7	1901	1903	Missouri	12,300 (13,500)	16,000	18	18-75	11	2½	6	8-12	6	1800	4-12 in.	2
8	1901	1904	Ohio				17-82	11	2½	6	8-12	6	1800	16-6 in. Q.	
9	1904	1905	New Jersey	14,948 (16,100)	19,000	19	19-48	11	3	6	7-12	6	900	6-3 in. Q.	0
10	1904	1905	Rhode Island				19-01						900	4 Smaller Q.	
11	1904	1905	Virginia	14,948 (16,100)	19,000	19	19-05	11	3	6	7-12	6	1900	4-12 in.	0
12	1904	1906	Nebraska				19-11						1900	8-8 in. Q.	
13	1904	1906	Georgia	14,948 (16,100)	19,000	19	19-26	11	3	6	7-12	6	1900	12-6 in. Q.	4
14	1904	1906	Louisiana				18-82						1900	20-3 in. Q.	
15	1904	1906	Connecticut	16,000 (17,800)	16,500	18	18-8	11	3	7	8-12	6-7	900	28 Smaller Q.	0
16	1905	1906	Kansas				18-96	9	3	7	8-12	4-7	900	4-12 in.	
17	1905	1906	Minnesota	16,000 (17,800)	16,500	18	18-86						2200	8-8 in. Q.	4
18	1905	1907	Vermont				18-33	9	3	7	8-12	4-7	2200	12-7 in. Q.	
19	1906	1908	New Hampshire	16,000 (17,850)	16,500	18-5	18-95						2200	20-3 in. Q.	2
20	1908	1909	Michigan				20-01	9	3	8	8-10	—	900	30 Smaller Q.	
21	1908	1909	S. Carolina	20,000 (22,075)	25,000	21	20-52	11	3	5	8-11	5	1000	8-12 in.	0
22	1909	1910	Delaware (1)				21-98	11	3	5	8-11	5	1000	22-14 pr. Q.	
23	1908	1910	North Dakota	21,825 (23,033)	28,000	20-75	22-25						2500	2 Smaller Q.	2
24	1909	1911	Utah				21-92	11	3	5	8-11	5	2500	10-12 in.	
25	1910	1911	Florida	26,000 (27,243)	28,000	20-5	22-54						1500	14-5 in. Q.	0
26	1911	1912	Wyoming				22-04	11	3	8	9-11	5	1500	4 Smaller Q.	
27	1911	1912	Arkansas	27,000 (28,367)	28,100	21	21-49						3000	12-12 in.	2
28	1912	1913	Texas				22-3	11	3	8	8-11	5	1500	21-5 in. Q.	
29	1912	1914	New York	27,500 (28,400)	28,500	21	22-3						3000	4 Smaller Q.	0
30	1913	1916	Nevada				—	13½	3	—	9-18	—	3000	10-14 in.	
31	1913	1916	Oklahoma (2)	31,400 (32,440)	31,500	21	—						1332	21-5 in. Q.	4
32	1915	1917	Pennsylvania				—	13½	3	—	9-18	—	2000	4 Smaller Q.	
33	1915	1917	Arizona	32,000 (37,000)	37,000	21	—						1548	10-14 in.	0
34	1916	—	California				—	14	3	—	9-18	—	2322	21-5 in. Q.	
35	1917	—	Idaho	32,000 (37,000)	37,000	21	—						2200	4 Smaller Q.	4
36	1917	—	Mississippi				—	14	3	—	9-18	—	3271	12-14 in.	
37	1918	—	(No. 43)	32,000 (37,000)	37,000	21	—						3271	22-5 in. Q.	4
38	1918	—	(No. 44)				—						3271	4 Smaller Q.	

(1) Delaware has reciprocating engines. Utah and Florida carry 16-5 in. (2) Oklahoma has reciprocating engines.

NOTE.—The figures in brackets in the Displacement Column represent the designed full load displacement. From Nevada downwards, all ships have oil fuel only. California, No. 43 (to be named) and No. 44 (to be named) have electrical transmission systems to their turbines.

UNITED STATES OF AMERICA (Continued).

8 Battleships and Monitors of Questionable Fighting Value.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Armour Inches.					Coal Capacity.	Armament.	
								A	B	C	D	E		Guns.	Tubes
1	1893	1895	Indiana	10,288	9,500	16.5	15.61	17	3	5	5-17	5-8	400	4-13 in.	nil
2	1893	1896	Massachusetts				16.15						1800	8-8 in.	
3	1893	1896	Oregon				16.78						1800	12-3 in. Q.	
4	1896	1897	Iowa	11,340	11,000	16.5	17.09	14	3	5	5-14	6-8	625	4-12 in.	nil
													1780	8-8 in.	
5	1900	1902	Ozark (1)	3,235	2,400	12	12.1	5	1 1/2	nil	11	nil	250	2-12 in.	nil
6	1900	1903	Tonopah (2)	3,218			13						400	4-4 in. Q.	
7	1900	1903	Cheyenne (3)	3,218			12.4						400	13 Smaller Q.	
8	1901	1903	Tallahassee (4)	3,225			12.4						400	13 Smaller Q.	

15 (ARMoured) CRUISERS.

1	1891	1893	Saratoga (5)	8,200	16,500	21	21	4	6	nil	5-10	4	750	4-8 in.	nil
													1180	10-5 in. Q.	
2	1895	1896	Brooklyn	9,215	18,000	21	22.2	2	3-6	nil	6-8	4	900	8-8 in.	nil
													1822	12-5 in. Q.	
3	1903	1905	Colorado	13,680	23,000	22	22.29	6	4	5	4-6	5-6	900	4-8 in. Q.	0
4	1903	1905	Maryland				22.4						900	14-6 in. Q.	
5	1903	1905	Pittsburg				22.48						2000	18-3 in. Q.	2
6	1903	1905	West Virginia				22.14						2000	30 Smaller Q.	
7	1904	1907	San Diego	9,700	21,000	22	22.26	4	3	4	—	4	650	14-6 in. Q.	nil
8	1904	1908	South Dakota				23.13						1500	18-3 in. Q.	
9	1904	1906	Charleston				22.03						1500	36 Smaller Q.	nil
10	1904	1906	Milwaukee				22.22						1500	36 Smaller Q.	
11	1905	1906	St. Louis	14,500	25,000	22	22.23	5	3	5	5-9	2	900	4-10 in.	0
12	1904	1906	Tennessee				22.16						900	16-6 in. Q.	
13	1905	1906	Washington				22.8						2000	22-3 in. Q.	4
14	1906	1908	Montana				22.26						2000	26 Smaller Q.	
15	1906	1908	North Carolina (6)	(7)			22.48								

(1) ex Arkansas.

(2) ex Nevada.

(3) ex Wyoming.

(4) ex Florida; has been used as target and will probably be removed from the active list.

(5) As re-armed, ex New York.

(6) North Carolina was adapted for experiments with seaplanes. May now have reverted to normal duty.

(7) Full displacement, 15,980 tons.

UNITED STATES OF AMERICA (Continued).

16 LIGHT CRUISERS.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Best Known Speed.	Coal Capacity.	Armament.			
									Guns.*	Tubes.		
1	1892	1894	Raleigh	3,213	10,000	19	{ 19.12 19.91 }	396	{ 11.5 in. Q. 12 Smaller Q. }	nil		
2	1892	1894	Cincinnati					556				
3	1892	1895	Olympia	5,870	17,000	21	21.69	500	{ 2.7 in. 10.5 in. Q. 14 Smaller Q. }	nil		
								1170				
4	1892	1894	Columbia	7,375	21,500	23	{ 22.8 23 }	750	{ 3.6 in. Q. 8.4 in. Q. 12 Smaller Q. }	4 0		
5	1893	1894	Minneapolis					1670				
6	1896	1898	New Orleans	3,487	7,500	20	{ 21 20.5 }	512	{ 10.5 in. Q. 8 Smaller Q. }	nil		
7	1899	1900	Albany					767				
8	1901	1903	Cleveland	3,200	4,500	16.5	{ 16.4 16.75 16.7 16.65 16.4 16.6 }	470	{ 10.5 in. Q. 15 Smaller Q. }	nil		
9	1902	1904	Denver									
10	1902	1904	Des Moines					700				
11	1903	1904	Chattanooga									
12	1903	1904	Galveston									
13	1903	1904	Tacoma									
14	1907	1908	Birmingham (1)	3,750	16,000 (T)	24	{ 25.34 26.52 27.7 }	475	{ 2.5 in. Q. 6.3 in. Q. }	0 2		
15	1907	1908	Chester					1250				
16	1907	1908	Salem									

(1) Birmingham has reciprocating engines.

74 DESTROYERS—56 COMPLETE.

- 16 *Bainbridge* (28.72), *Barry* (28.13), *Chauncey* (28.64), *Dale* (28), *Decatur* (28.1), *Hopkins* (29.02), *Hull* (28.04), *Lawrence* (28.41), *Macdonough* (28.03), *Paul Jones* (28.91), *Perry* (28.32), *Preble* (28.03), *Stewart* (29.3), *Truxton* (29.58), *Whipple* (28.24), and *Worden* (29.86). Launched, 1900-02. Displacement, 400-433 tons. I.H.P. 7,000-8,400 = 28 knots. Armament, 2-14 pr. Q., 5-6 pr. Q., and 2 torpedo tubes. Coal capacity, 115-232 tons.
- 5 *Smith* (32), *Lamson* (28.82), *Preston* (29.2), *Flusser* (33.67), and *Reid* (34.548). Launched, 1909. Displacement, 700 tons. I.H.P. (T) 10,000 = 28 knots. Armament, 5-14 pr. Q., 2 machine guns, and 3 torpedo tubes.
- 15 *Ammen* (30.48), *Burrows* (30.67), *Drayton* (33.44), *Mayrant* (30.219), *McCall* (30.68), *Monaghan* (30.45), *Patterson* (29.68), *Paulding* (33.94), *Perkins* (29.76), *Roe* (29.6), *Sterrett* (33.04), *Terry* (30.47), *Trippe* (30.89), *Walke* (31.653), *Warrington* (30.123). Launched, 1909-11. Displacement, 742 tons. I.H.P. (T) 12,000 = 30 knots. Armament, 5-14 pr. Q., 2 machine guns, and 3 torpedo tubes.
- 6 *Beale* (29.65), *Fanning* (29.99), *Henley* (30.02), *Jarvis* (32.374), *Jenkins* (31.27), *Jouett* (32.27). Launched, 1912. Displacement, 755 tons. I.H.P. (T) 13,000 = 29.5 knots. Armament, 5-14 pr. Q., 2 machine guns, and 3 twin 18 in. torpedo tubes. 1910 programme.
- 8 *Aylwin*, *Balch*, *Benham*, *Cassin*, *Cummings*, *Downes*, *Duncan* (30.1), *Parker* (30.33). Launched, 1913. Displacement, 1,014 to 1,072 tons. I.H.P. (T) 16,000 = 29.5 knots. Armament, 4-4 in. Q. and 3 double torpedo tubes. 1911 programme.

UNITED STATES OF AMERICA (Continued).

DESTROYERS (Continued).

- 6 *Cushing, Ericson, McDougal (32'07), Nicholson, O'Brien, Winslow.* Launched 1913-14. Displacement, 1,025-1,090 tons. I.H.P. (T) 17,000 = 29.5 knots. Armament, 4.4 in. Q., and 4 twin tubes. 1912 Programme.
- 6 *Corynham, Jacob Jones, Porter, Tucker, Wadsworth, Wainwright.* Launched, 1914-15. Displacement, 1,050 tons. I.H.P. (T), 17,000-17,500 = 29.5 knots speed. Armament, 4.4 in. Q. and 4 twin tubes. 1913 Programme.
- 6 Nos. 63-68 (names not known). Displacement, 1,110 tons. I.H.P. (T) = 29.5 knots speed. Armament, 4.4 in. Q., 4 triple tubes. 1914 Programme.
- 6 *Allen, Davis, Rowan, Sampson, Shaw, Wilkes.* Displacement, 1,125 tons. I.H.P. (T) = 29.5 knots speed. Armament, 4.4 in. Q., 2.1 pr. Q. (anti-aero), 4 triple torpedo tubes. 1915 Programme.

TORPEDO-BOATS—20 + 3 of doubtful efficiency.

- 1 *Stringham (25'33) (1899), 340 tons. I.H.P. 7,200 = 30 knots. Armament, 4.6 pr. Q. and 2 tubes. Coal capacity, 120 tons.*
- 3 *Farragut (30'13) (1898, 273 tons), Goldsborough (27'4) (1902, 247 tons), Bailey (30'2) (1899, 235 tons).* Speed, 28-30 knots. Armament, 4.6 pr. and 2 torpedo tubes. The above four are really weakly armed destroyers.
- 14 *Barney (29'04), Biddle (28'57), Blakeley (25'58), Dahlgren (30), De Long (25'52), Dupont (28'58), Foote (24'53), Rodgers (24'49), Shubrick (26'07), Somers (17'5), Stockton (25'79), T.A.M. Craven (30'0), Thornton (24'38), Tingey (24'94).* Launched, 1896-1902. Displacement, 142-182 tons. Speeds, 24.5-30 knots. Armament, 3 to 4 small Q. and 3 torpedo tubes.
- 2 *Fox (23'13) and Morris.* Launched, 1890-98. Displacements, 105-132 tons. Speeds, 22.5-24 knots. Armament, a few small guns and 2 or 3 torpedo tubes.

NOTE.—Six of the above torpedo-boats have probably been condemned and their names transferred to the new destroyers, Nos. 63-68.

84 SUBMARINES—45 COMPLETE.

- 6 A2, A3-A7 (ex *Adder, Grampus, Mocassin, Pike, Porpoise, Shark*). 1901-03. 125 tons. I.H.P. 160 = 7-8 knots. Armament, 1 torpedo tube.
- 3 B1-B3 (ex *Cuttlefish, Viper, Tarantula*), 1906-07. 172-200 tons. H.P. 250 on surface. Speed, 10 knots on the surface, 9.4 knots submerged. Armament, 1 torpedo tube.
- 5 C1-C5 (ex *Octopus, Stingray, Tarpon, Bonita, Snapper*). Launched, 1907-09. 255-274 tons. I.H.P. 500 = 12 knots on the surface, 10 knots submerged. Armament, 2 torpedo tubes.
- 3 D1-D3 (ex *Narwhal, Grayling, Salmon (12'7)*). Launched, 1909-10. Displacement, 278-340 tons. H.P. 600 on surface. Speed, 12 knots on the surface, 10 knots submerged. Armament, 4 torpedo tubes.
- 6 E1-E2, F1-F4 (ex *Skipjack, Surgeon, Carp, Barracuda, Pickerel, Skate*). Launched, 1911. Displacement, 400-435 tons. I.H.P. 780 on surface. Speed, 14-9 knots. Armament, 4 torpedo tubes.
- 3 G1-G3 (ex *Seal, Tuna, Turbot*). Launched, 1911-13. Lake type enlarged. Displacement, 400-525 tons. H.P. 1,200 on surface. Speed, 16 and 9.5 knots. Armament, 4 tubes.
- 1 G4 (ex *Thrasher*). Launched, 1912. Displacement, 358-456 tons. I.H.P. 1,000-400 = 14 knots on the surface and 9.4 knots submerged. Armament, 4 torpedo tubes. Laurenti design, built at Philadelphia by Messrs. Cramp.

UNITED STATES OF AMERICA (Continued).

SUBMARINES (Continued).

- 3 H1-H3 (ex *Seawolf*, *Nautilus*, *Garfish*). Launched, 1913. Displacement, 450 tons. I.H.P. — = 14-11 knots. Armament, 4 torpedo tubes.
- 8 K1-K4 (ex *Haddock*, *Cachalot*, *Orca*, *Walrus*), and K5-K8. Launched 1913-14. Displacement, 390-525 tons. I.H.P. 950 = 14½-10½ knots. Armament, 6 torpedo tubes.
- 7 L1-L4, L9-L11. Launched, 1914-15, and building by Electric Boat Co. (1,000 H.P. Niseco Diesel motors.)
- 4 L5-L8. Launched, 1914-15, and building by Lake Boat Co. (1,200 H.P. Busch-Sulzer Diesel motors.)
- 1 M1. Launched, 1915. Displacement (about) 700-1,200 tons. H.P. 5,000-. Speeds 20 and 12 knots. Armament, 10 torpedo tubes and 12-pr. Q.F. guns.
- 7 N1-N3, building by Electric Boat Co. N4-N7, building by Lake Boat Co.
- 1 *Schley*. Building. Displacement (about) 1,100-1,500 tons. H.P. 4,000-. Speeds, 20 and 12 knots. Armament, 10 fixed and revolving twin deck tubes, 12-pr. Q.F. guns. (From similarity in details, *Schley* and M1 may be the same submarine, M1 being the index-mark of *Schley*.)
- 8 "Nos. 52-59" (to be lettered and numbered). To be built under 1914 Naval Programme.
- 2 Ocean-going submarines, over 1,500 tons displacement. To be built under 1915 Naval Programme. Reported to have Talbot flash-burner boilers and Talbot uniflow steam engines of over 5,000 H.P.
- 16 Coastal submarines to be built under 1915 Naval Programme.

MINOR CRAFT

The following vessels are still retained upon the active list of the United States Navy :—

15 GUNBOATS: *Wheeling*, *Marietta* (1897), 1,000 tons. Speed, 13 knots. Armament, six 4 in. Q., and nine smaller. *Helena* (1896), *Wilmington* (1885), 1,400 tons. Speed, 15 knots. Armament, eight 4 in. Q., and ten smaller. *Paducah*, *Dubuque* (1904), 1,110 tons. Speed, 11-8 knots, trial. Armament, six 4 in. Q., and eight smaller. *Woodruff* (1904), 200 tons. Speed, 10 knots. Armament, three small quick-firers. *Petrel* (1888), 800 tons. Speed, 1-35 knots. Armament, four obsolete 6 in. Q., and a few smaller. *Annapolis*, *Princeton*, *Vicksburg*, *Newport* (1896-97), 1,000 tons. Speed, 13 knots. Armament, six 4 in. Q., and several smaller Q. *Sacramento* (1913), 1,425 tons, 15 knots. Armament, 3-4 in. Q.; 2-1 pr. and 2 machine; and *Monocacy* and *Palos*, 190 tons, 13 knots, 2-6 pr. Q. and four smaller.

The Uraga Dock Company, of Japan, have built five coast-patrol gunboats for the Philippines. They are named *Romblon*, *Bobol*, *Bebu*, *Jolo*, and *Marie Duque*. Their length is 140 ft.; beam, 23 ft.; draught, 8 ft.; I.H.P. 450=10 knots. Displacement, 350 tons. Armament, 3 small quick-firers. Also two 70 ft. police launches for Shanghai, carrying one 1 pr. Q. and 2 machine guns.

Naval Militia :—A number of minor cruisers and small gunboats are retained by the Naval Militia; having no warlike value, they are not detailed here. A Volunteer Motor Boat Reserve is being formed and the construction of several large and fast ocean-going motor boats, armed with a single torpedo-tube, is proposed.

UNITED STATES OF AMERICA (Continued).

SEA-GOING FLEET AUXILIARIES.

No.	Year of Launch.	Year of Completion.	Name.	Displacement in Tons.	Designed I.H.P.	Designed Speed.	Armament.	Notes.
1	1915	—	Achilles	19,825	—	14	—	Fleet Collier
2	1874	—	Alert	1,110	560	10	6-4 in. Q., 4-6 pr. Q.	Submarine Tender
3	1888	1890	Baltimore	4,413	10,000	20	12-6 in. Q., 16 Smaller	Mine-Layer
4	1914	1915	Bushnell	3,580	—	12	4-3 pr. Q.	Submarine Depot-Ship
5	1892	1893	Castine	1,177	2,000	14½	2-6 pr. Q.	" "
6	1915	—	Cuyama	14,500	—	14½	—	Oil Fuel Ship
7	1910	1911	Cyclops	19,670	7,500	14	4-3 in. Q.	Fleet Collier
8	1894	1898	Dixie	6,114	3,800	14½	10-14 pr. Q., 2-6 pr. Q.	Flotilla Tender
9	1907	1908	Erie	12,500	5,500	16	4-3 in. Q.	Fleet Collier
10	1913	1914	Fulton	1,480	—	12-25	4-14 Pr. Q.	Submarine Tender
11	1909	1910	Hector	11,390	7,200	14	4-6 pr. Q.	Fleet Collier
12	1886	1898	Iris	6,100	1,320	10	—	Flotilla Tender
13	1912	1913	Jason	19,360	7,500	14	4-3 in. Q.	Fleet Collier
14	1910	1911	Jupiter	19,670	7,500	14	4-3 in. Q.	" "
15	1915	—	Kanawha	14,500	10,000	14½	—	Oil Fuel Ship
16	1909	1910	Mars	11,390	7,200	14	4-6 pr. Q.	Fleet Collier
17	1916	—	Maumee	—	—	—	—	Oil Fuel Ship
18	1914	—	Melville	7,150	—	—	8-5 in. Q., 2½ pr. Q., 2 torpedo tubes	Destroyer Depot-ship
19	1873	—	Mohican	1,900	1,150	—	4-6 pr. Q.	Submarine Tender
20	1911	1911	Neptune	19,670	—	14	—	Fleet Collier
21	1912	1913	Nereus	19,360	7,500	14	4-3 in. Q.	" "
22	1907	1908	Ontario	12,500	7,500	16	4-3 in. Q.	" "
23	1912	1913	Orion	19,360	7,500	14	4-3 in. Q.	" "
24	—	1898	Pompey	3,085	—	—	—	Flotilla Tender
25	1909	1909	Prometheus	12,585	7,500	16	4-3 in. Q.	Fleet Collier
26	1912	1913	Proteus	19,360	7,500	14	4-3 in. Q.	" "
27	1903	1904	Relief	3,000	—	13	—	Hospital Ship
28	1899	1899	San Francisco	4,098	8,500	19	12-6 in. Q., 14 Smaller	Mine-Layer
29	1899	1899	Severn	1,175	—	—	—	Submarine Depot-Ship
30	1896	1898	Solace	5,790	—	15	—	Hospital Ship
31	1915	—	Ulysses	19,825	—	14½	—	Fleet Collier
32	1908	1909	Vestal	12,500	7,500	16	4-3 in. Q.	" "
33	1909	1910	Vulcan	11,390	7,200	14	4-6 pr. Q.	" "

Also 12 other Fleet Colliers, *Abarenda, Ajax, Arethusa, Brutus, Caesar, Hannibal, Justin, Leonidas, Nanshan, Nero, Saturn, Sterling*, 3,300-9,250 tons, 9-11 knots speed.

MINOR NAVAL POWERS.

COLOMBIA.

This State possesses the cruiser *Almirante Lazo* (1,200 tons, 18 knots, and a few small guns), the *Bolívar* of 981 tons, *General Pinzon* of 740 tons, and the *Bogotá*, a 643-ton gunboat. There are also two transports and three small petrol-engined river-gunboats built by Harrows in 1912 and re-erected.

COSTA RICA.

An obsolete torpedo boat and a stern-wheel gunboat.

EGYPT.

Egypt owns a flotilla of stern-wheel river gunboats of from 128 to 140 tons. Their names are *Sultan*, *Sheikh*, *Melik*, *Fateh*, and *Naseh*. Older vessels are the *Abu-Klea*, *Hafir*, *Melemmeh*, and *Tamat*. Also various small Coastguard craft (some armed with 2 or 3 small Q.F. guns), now used on patrol duties.

HAYTI.

Cruiser, *Ferrier* (ex *Umbria*) (1891). Purchased from Italy. 2,245 tons, 7,500 I.H.P. = 18.5 knots. Armament, 8-4.7 in. Q., 16 Smaller, and two tubes.
Corvette, *Dessalines* (1,200 tons), carrying 3-3.9 in., and 4 small Q. Gunboats, *Capois la Mort* and *Alexander Pelion*, 260 tons, 1-3.9 in. and 4-1 pr. Q. Two sloops and 3 gun vessels.

SAN DOMINGO.

Gunboats.—*Independencia* (1894), 322 tons and seven machine guns, *Presidente* (1896), 8 small guns, 3 river gunboats (1907), with one small gun and a speed of 12½ knots.

SARAWAK.

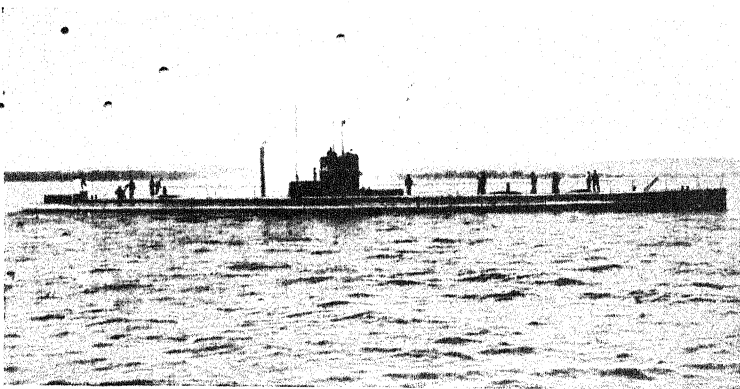
Four small yachts mounting guns of light calibre.

SIAM.

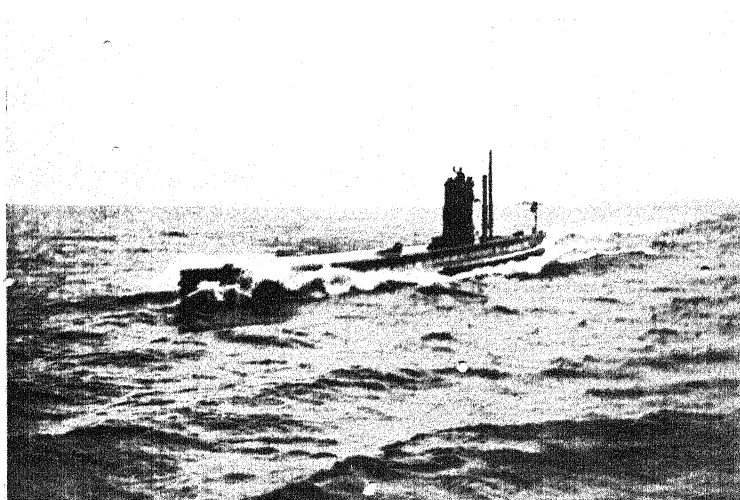
- 2 Protected Cruisers.—*Maha Chakrri*, 2,500 tons, 18 knots, armed with 4-4.7 in. Q. and 10 smaller guns. (Also used as a Royal Yacht.) Another small protected cruiser of 1,890 tons was laid down at Elswick in Nov. 1913.
- 5 Gunboats.—*Suriya Monthon* (1908), 260 tons. I.H.P. 700 = 14.5 knots. Armament, 1-6 pr. Q. and three smaller guns. (Also used for Customs duties.) *Bali-Langtevit*, *Sucrib-Kraw-Muang* (1901), *Muratha* (1898), 550 tons. Speed, 11-12 knots. Guns, 1-4.7 in. Q. and four or nine smaller guns. *Mahut-Rajah-Kumar* (1887, bought 1891), 560 tons. Speed, 12 knots. Armed with two old 4.7 in. and 6 smaller guns.
- 3 Destroyers.—*Sua-Kamron-Sint* (1912), *Sua-Tajaru-Chol* (1908), 380 tons. I.H.P. 6,000 = 27 to 29 knots. Guns, 1-12 pr. Q., 5-6 pr. Q., and 2 torpedo tubes. A third destroyer of 800 tons is to be built.
- 5 Torpedo Boats.—Nos. 1-4 (1908-13), 88 tons. Speed 22 knots. Guns, 1-6 pr. Q., 1-3 pr. Q., 2 tubes. A fifth boat of 50 tons is being built.
- 5 Small Despatch-vessels of 110-200 tons, built between 1897 and 1907. Also two transports and about 50 small river craft of 20-70 tons.

VENEZUELA.

- 3 Gunboats.—*Marescal Sucre* (1886. Bought from U.S., 1912). 1,125 tons. I.H.P. 1,000 = 14 knots. Guns, 6-3 in. Q., 4-6 pr. Q. *Bolívar* (1891. Bought from Spain, 1898). 671 tons. Speed (nominal) 18.5 knots, now 10 knots or less. Armed with 4-6 pr. Q. and 2 tubes (above water). *Miranda* (1895. Bought from Spain, 1898.) 200 tons. Speed, 12 knots. Has 2-6 pr. Q. guns.
- Old Torpedo Boat *Margarita* (1887. Bought from Ecuador, 1898). 97 tons. Nominal speed 25.5 knots, much less now. Guns, 4-3 pr. Q. and two tubes (above water). Also a transport (*Zamora*), two Coastguard tenders, a yacht, and a few sailing vessels.



GERMAN SUBMARINE—TYPE "B"



[Photos by courtesy of *The Motor Boat*
 GERMAN SUBMARINE—TYPE "A"
 (See p. 350 for details)

APPENDIX.

The Navy League Boys' Naval Brigade.

"For God, for the King, for the Empire."

THE present war has brought prominently forward the need of keeping up the supply of boys and men for the Navy, and the splendid achievements of all branches of the naval service are convincing proof that the question of personnel is all-important for success. Some account, therefore, of the work done by the Navy League to educate boys to believe in the British Empire and the British Navy, and so create another source of supply, will be of interest to all who know the value of our "Sure Shield" and the fine career it offers to suitable boys.

The Boys' Naval Brigade movement, as a branch of the Navy League, originated in December 1910, when a sub-committee was appointed to consider what help could be given to training brigs and brigades which were already affiliated to the Navy League or should become so in the future. It was decided that a Central Committee should be formed, under the President of the Navy League, to supply brigades with competent instructors and equipment and to consider applications for grants in aid to defray the cost of uniforms and other incidental expenses.

This Central Committee was also empowered to approach the Admiralty with regard to facilities for obtaining the use of rifles, field-guns, and boats for instructional purposes, and was charged with the duty of drawing up a uniform scheme of training. The Central Committee, which was a strong one, comprising representatives of the Navy and Army and members of the local Brigade Committees, with the Secretary of the Navy League as Chairman, began work in 1911, and since that time seventeen Boys' Naval

Brigades in the London district and ten country brigades have been affiliated.

Four training brigs—three in the country and one in London, besides the Liscard Sea Training Home—are also affiliated. In forming local units of the Brigade the object kept in view is to teach boys leaving or about to leave the elementary schools habits of discipline, duty, and self-respect, and, although it is not sought to force boys into a maritime career, the educational result of the training has led a large proportion of them to enter the Royal Navy or the Mercantile Marine. Most of the lads are working boys; it is only possible, therefore, as a general rule to have instruction in the evening and on Saturdays, the subjects taught, as far as local conditions will allow, being:

Seamanship (knotting, splicing, compass, etc.).

Signalling (Morse and semaphore, flags, etc.).

Rule of the road at sea and simple pilotage.

Rifle exercises and rifle-shooting.

Field-gun drill.

Boxing.

Physical drill and Swedish exercises.

Fencing or cutlass drill.

First aid (including stretcher drill).

Swimming and life-saving.

Boating, both under oars and sail.

Fire drill.

Camping (making field kitchens, etc.).

Cooking.

Model-making.

Dancing (hornpipe).

Most of the brigades possess bugle-and-drum or fife-and-drum bands, and band practice is also included in the training. Admission registers are kept at the headquarters of the different units, and returns of drills and exercises are sent in periodically to the Central Committee recording the boys' attendances and proficiency in the instruction given.

In order to encourage good attendances and keenness the Navy League instituted an annual meeting for the London units, when challenge cups are competed for, and, by permission of the Admiralty, officers of the Royal Navy kindly give their services as judges. The reports furnished on these occasions are most useful to the officers of the

Brigade, and the encouragement given has been an incentive to further effort.

Excepting in the case of the paid instructors the Brigade officers give their services voluntarily and are keen in promoting the interests of their units and in supplementing the efforts of the local Brigade Committees to secure support for the movement.

It has long been the wish of the Central Committee to obtain official recognition from the Admiralty, and a scheme for affiliation was drafted in 1914 and was receiving favourable consideration when, at the outbreak of war, in deference to the wishes of the Admiralty, the question was postponed. In the meantime the Central Committee continue to issue warrants to officers of the Brigade and forms of enrolment for the boys, and an official Handbook is published by the Navy League dealing with such subjects as the organisation of units, the duties of officers, the subjects to be taught, with a senior and junior minimum standard, and with regulations for the uniforms to be worn by officers and boys. The Naval Secretary of the Navy League is Commander of the Brigade, and there is an Honorary Secretary who acts as his assistant.

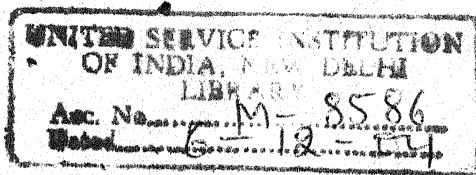
Since the commencement of the war a great impetus has been given to the movement, and, in spite of the fact that the Commander of the Brigade and many of the officers and naval instructors have gone on active service, the Brigade is following one of the best traditions of the service and is "carrying on." A return recently received shows that during the last twelve months 49 officers and 818 boys belonging to the different units, to the affiliated training brigs, and to the Liscard Home, have joined the Navy, the Army, and the Mercantile Marine, and it speaks well for the instruction received that boys trained in the London district were accepted for service as Signal Boys R.N.R. in H.M. Patrol Yachts, and that their standard of efficiency is spoken of favourably.

In addition to supplying this large number for active service, the boys belonging to the Brigade are employed as messengers at the Admiralty and the War Office, by the Australian and New Zealand War Contingents Associations, and by local recruiting and relief committees. They have furnished guards for dock bridges and waterworks, are employed helping in coastguard work and as patrols for

seaplane sheds and aerodromes, and have taken a great part with their hands in recruiting marches and meetings in London and throughout the country.

The Brigade has every year sent a contingent to the Empire Day Review, and this year was invited by the City of London Territorial Force Association to join the Cadet Parade which was reviewed by the King in the gardens of Buckingham Palace and subsequently in Hyde Park marched past Major-General Sir Francis Lloyd, K.C.B., Commanding the London District. On this occasion the Boys' Naval Brigade paraded with 37 officers, 800 boys, and 5 field-guns, and, as representing the Senior Service, was accorded the right of the line. The report states that "His Majesty the King was graciously pleased to express his great satisfaction at the very excellent manner in which the boys of the London Cadet Corps marched past at Buckingham Palace," and Sir Francis Lloyd in his report says: "I was greatly pleased at the appearance of the Cadets, at their smartness and their general turn-out, and at the way in which they marched, all of which conveyed to me the great attention they must have paid to their instructors. I feel that a very great tribute is due to the latter for the time that they give up and the interest they take in this patriotic movement." That such good results should have followed this effort of the Navy League to supply an undoubted demand in a practical manner shows that the movement has been justified, and the promoters have good grounds for hoping that their appeal for official recognition, backed as it is by such an excellent record, may meet with success.

M. E. DALRYMPLE HAY,
Honorary Secretary, Boys' Naval Brigade.



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